AN OUTLINE OF ABNORMAL PSYCHOLOGY

By

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To
WILLIAM DUNLOP TAIT

FOREWORD

This outline presents a fairly complete list of the abnormal mental phenomena, it shows how these phenomena are grouped into the syndromes manifested in the various psychoses and neuroses, and it summarizes briefly the most important etiological facts and explanatory theories of the mental anomalies and diseases. An attempt has been made to present in summary the various aspects of this many-sided subject without disproportionate emphasis or neglect of any topic or theory.

The purpose of the outline is to serve as a guide for students of abnormal psychology in the absence of a comprehensive text-book. It is hoped that it will be found useful also by those medical students and students of social service who desire a general survey of this field but who have insufficient time for a regular supervised course or for extensive reading of the very much scattered literature. It should of course be regarded as mainly directive and mnemonic; and the references should be consulted for illustration of facts and exposition of theories.

J. W. B.

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PART I
The Abnormal Phenomena

CHAPTER I.

Definitions and Classifications.

I. Definitions of Psychology.

1. The science of consciousness. Objections to this definition are:
   a. Since each individual can know only his own consciousness, all psychology is thus *self-psychology*, and generalization, the basis of science, is impossible.
   b. A science of consciousness cannot be explanatory, unless "Psychical causality" is hypothecated.
2. The science of human or animal behavior. The main objection to this definition is that this is not psychology in the traditional sense.

II. Definitions of the Abnormal.

1. Away from the norm, standard, or rule, i. e. deviating from the central tendency. The abnormal is thus an extreme individual difference, a caricature of the normal. Cf. the normal distribution curve.
2. Deviating from the ideal of perfect function or best possible adaptation. This definition is equivalent to the first, if the ideal is the central tendency; but, since ideals differ, the first is the best objective definition.

III. Definition of Abnormal Psychology. This will depend upon the definition adopted for psychology; but, without taking sides on a controversial question, it may be defined provisionally as *the description, classification, and explanation of unusual types of behavior (or consciousness), that is, behavior (or consciousness) that deviates considerably from the norm or central tendency.* In this outline the material is presented for the most part in the traditional terminology of the literature; and, if the student adopts a behavioristic standpoint, he may exercise his ingenuity in making the necessary changes in language or classification.

IV. The Value of Abnormal Psychology.

1. Theoretical. It leads to a better understanding of the normal mind, because in the abnormal certain mental processes are thrown into relief. This aspect has been called *pathopsychology.*

2. Practical. It aids in the diagnosis, prognosis, and treatment of mental diseases. This aspect has been called *psychopathology*.

V. Classification of Mental Disorders.

1. Wernicke's classification.
   a. Psychosensory disorders, including disorders of sensation and perception, or those *affecting the sensory neurones*.
      (a) Anesthesia.
      (b) Hyperesthesia.
      (c) Paresthesia.
   b. Psychomotor disorders, including disorders of action and volition, or those *affecting the motor neurones*.
      (a) Akinesis.
      (b) Hyperkinesis.
      (c) Parakinesis.
   c. Intrapsychic disorders, including disorders of memory, ideation, etc., or those *affecting the association neurones*.
      (a) Afunction.
      (b) Hyperfunction.
      (c) Parafunction.

   The prefix *a* (*or hypo*) may be translated absence of (or decrease of), *hyper*, increase of, and *para*, perverse or false; and it will be clear that any abnormality must fall into one of these classes.

2. In this outline the abnormal phenomena are classified as far as possible in accordance with the rubrics of normal psychology, e. g. sensation, perception, memory, feeling, etc.; but in every case Wernicke's distinction of the *a*, *hyper*, and *para* disorders will be found to apply.

VI. Explanation of Abnormal Phenomena.

1. Psychological explanation is sometimes given, e. g. by Freudians. (*The mind twist hypothesis.*) Such explanations, however, should be considered either as *interpretations or as provisional statements* of the "Conscious" (usually verbal) correlates of neurological processes or changes not yet fully understood.
2. Neurological explanation (*the brain spot hypothesis*) of abnormal as of normal phenomena is the only explanation that can be accepted finally; but in the present state of our knowledge we shall often be obliged to accept tentatively some of the "Provisional statements" referred to above.

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CHAPTER II.

Sensation.

I. Cutaneous Sensation.

1. Cutaneous anesthesia and hypesthesia, may be organic or functional, i. e. *due to actual lesion in the nervous system* or *to dissociation of functionally related groups of neurones.*
   a. Anesthesia in the narrow sense, i. e., loss of the sense of touch —very often systematized, as e. g. in the "Glove" and "Shoe" of anesthesia.
   b. Analgesia, loss of pain sensation.
   c. Thermo-anesthesia, loss of temperature sensation.
2. Cutaneous hyperesthesia, due to increased nervous irritability.
   a. Hyperesthesia in the narrow sense, increased sensitivity to touch.
   b. Hyperalgesia, increased sensitivity to pain.
   c. Thermo-hyperesthesia, increased sensitivity to temperature changes.
3. Cutaneous paresthesia. (For explanation, see under Illusion and Hallucination.)
   a. Sensation of numbness, prickling, tingling, boring, burning, crawling, or of insects creeping (e. g. the "Cocaine bug").
   b. Allochiria, sensation indefinitely localized, or localized contralaterally.

II. Visual Sensation.

1. Visual anesthesia and hypesthesia, may be *organic* or *functional* as cutaneous anesthesia above.
   a. Myopia, nearsightedness, a maladjustment of focusing apparatus.
   b. Hyperopia, farsightedness, a maladjustment opposite to above.
   c. Astigmatism, defective curvature of refracting media.
   d. Presbyopia, indistinct vision, due to defective accommodation in old age.
   e. Diplopia, double vision, due to external ophthalmoplegia.
   f. Amblyopia and amaurosis, dimness of vision that cannot be corrected by lenses, and loss of sight, probably due to optic atrophy, but may be functional in some cases.

g. Hemianopsia, blindness on one side of the visual field, *due to lesion in the primary visual area of one occipital lobe or in the optic tract;* but sometimes functional.

h. Concentric narrowing of the field of vision, usually functional, but may occur in brain tumor.

i. Scotomata, blind spots, central or eccentric.

j. Systematized visual anesthesia, blindness for some particular object in the field of vision, a hysterical sympton (i. e. functional) sometimes referred to as *negative hallucination.*

k. Color-blindness, partial or complete, due to inherited retinal defect, occasionally acquired, otherwise known as *achromatopsia.*

2. Visual hyperesthesia, increased sensitivity or acuity of vision, frequently accompanied by *photophobia,* fear and avoidance of light.

3. Visual paresthesia, the *photomata,* flashes of light, sparks, or color with no objective basis.

III. Auditory Sensation.

1. Auditory anesthesia and hypesthesia are usually *organic,* but may be *functional,* as in hysterical deafness.

2. Auditory hyperesthesia, increased sensitivity to sound, is frequently accompanied by *dysacousia,* discomfort and annoyance produced by sounds.

3. Auditory paresthesia, the *akoasms,* buzzing, ringing, roaring, or explosive sounds in the ears or head.

IV. Olfactory Sensation.

1. Anosmia, partial or total, loss of some or all smell sensations, may be organic or functional.

2. Hyperosmia, increased sensitivity to odors.

3. Parosmia, subjective smell sensations. (See Illusions, Hallucinations.)

V. Gustatory Sensation.

1. Ageusia, partial or total, loss of some or all taste sensations, may be organic or functional.

2. Hypergeusia, increased sensitivity to tastes.

3. Parageusia, subjective taste sensations.

VI. Kinesthetic Sensations.

1. Anesthesia of the muscle, tendon, or joint sense results in *inability to perceive the position or movement of the affected limb,* and

g. Hemianopsia. [redacted] lem, tr. by Mayer, 59-64, *lesion in the primary* [redacted] *optic tract;* but [redacted] .1. D., 44, 1916, 193-206.

h. Concentric [redacted] ubject). but may occur in [redacted] s and Diagnosis of Psycho-

i. Scotomata, [redacted] er, 1914.

j. Systematized [redacted] s Disorders, 105-110. Lewis, object in the field [redacted] al) sometimes [redacted]

k. Color-blindness, [redacted] defect, [redacted]

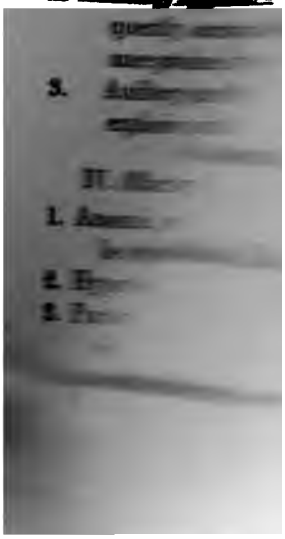
2. Visual hyperesthesia, [redacted] frequently [redacted] light.

3. Visual [redacted] color with [redacted]

III. [redacted]

1. [redacted] be [redacted]

2. [redacted]



3. [redacted]

II. [redacted]

1. [redacted]

2. [redacted]

3. [redacted]

consequent inaccuracy and awkardness in its use. This disorder may also be organic or functional.

2. Kinesthetic hyperesthesia, increased sensitivity to movement of limbs.
3. Kinesthetic paresthesia, false sensation of movement. (See Hallucination).

VII. Vestibular and Ampullar Sensations. The sensation of dizziness may be (1) decreased, (2) increased, or (3) subjectively aroused. In the last case the patient feels as if he were falling or inverted.

VIII. Organic Sensation, Hunger.

1. Hunger anesthesia, loss of hunger, may result in refusal of food.
2. Hunger Hyperesthesia, exaggerated hunger, may result in gluttony.
3. Hunger paresthesia, abnormal craving for unusual kinds of food.

IX. Organic Sensation, Nausea.

1. Nausea anesthesia, loss of nausea sensation (*or feeling*), may result in the eating of noxious and disgusting substances.
2. Nausea hyperesthesia and paresthesia, may frequently be the cause of refusal of food (anorexia).

X. Other Organic Sensations.

1. The sensation of distension of the bladder or rectum may be abnormal, in which case the patient cannot properly control the excretory functions.
2. Abnormal respiratory sensations are frequent, e. g. sensations of stuffiness or suffocation.
3. "Globus Hystericus," and the "Epigastric Sensation" are two especially important organic paresthesias.
4. Genital Sensation. Sexual anesthesia, hyperesthesia, and paresthesia will be considered under Instinct.

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CHAPTER III.

Perception

Disorders of perception can be classed under four main heads: (A) Imperception, (B) Synesthesia, (C) Illusions, and (D) Hallucinations.

A. Imperception.

Imperception, or agnosia, is an insufficiency of perception, the impression fails to arouse its associated images or reaction trends, and therefore it has no meaning.

I. General Imperception (Kraepelin's disturbance of apprehension), stimuli lose their meanings, are vague, uncertain, and strange. This constitutes one aspect of the so-called "Clouded consciousness."

II. Specific Imperception, only one type of perception involved.

1. Visual imperception, *mental blindness.*
   a. Alexia, word-blindness, verbal agnosia, printed characters have lost their significance, though still seen clearly enough.
   b. Object blindness, asymbolia in the broadest sense, objects seen have lost their meanings, and hence are not recognized.
   c. Loss of space perception, especially the third dimension. This must be distinguished from spatial disorientation. (See Chap. VIII).

   Explanation of visual imperception: lesion or loss of function (through dissociation) in the *visuo-psychic, the secondary visual area* of the occipital lobe. Cf. hemianopsia where the lesion is in the visuo-sensory, the primary visual area of this lobe.
2. Auditory imperception, *psychic deafness.*
   a. Word-deafness, spoken words are heard, but convey no meaning. This may result in the so-called *sensory aphasia*, because of the loss of the cue to speech. (See Chap. XII.)
   b. Amusia, loss of ability to apprehend melodies.

   Explanation of auditory imperception: lesion or loss of function of the *primary auditory receiving station in the left hemisphere* (Meyer), *or of the elaborative, secondary, audio-psychic area,* as distinguished from the audio-sensory, the primary auditory area.

3. Tactile-kinesthetic imperception. The most important anomaly under this heading is *astereognosis* (*or stereoagnosis*), the loss of ability to recognize objects by cutaneous and kinesthetic senses, that is by "Feeling" them.
   Explanation of tactile-kinesthetic imperception: lesion or loss of function (through dissociation) in the *post-Rolandic area.* By analogy with vision and audition the lesion would be in the *secondary or elaborative part* of this area, and lesion or loss of function of the primary receiving station would result in actual loss of cutaneous and kinesthetic sensations rather than their meanings.
4. Olfactory, gustatory, and other forms of imperception are also possible. These would differ from anosmia, ageusia, etc., in that the stimuli would be sensed but not recognized.

B. SYNESTHESIA.

Synesthesia or *reflex hallucination* is the arousal of a secondary sensation automatically by a sensation of a different modality.

I. The Kinds of Synesthesia.

1. Colored hearing or chromesthesia, certain sounds result in a simultaneous sensation of a definite color or light, a *sound photism.* If such a photism is a complex perception of an object, it is a hallucination.
2. Colored taste, smell, pain, pressure, temperature, etc., may also occur, i. e. a photism may be aroused by any stimulus.
3. Tonal vision or *light phonism,* the arousal of a tone sensation by a light stimulus, seems to be a rare phenomenon.
4. Olfactism and gustatisms, smells and tastes aroused indirectly by other stimuli, have been reported.

II. Explanations of Synesthesia.

1. The embryological theory: incomplete anatomical differentiation of cortical centers, e. g. of visual and auditory centers to explain photisms and phonisms.
2. Physiological theories.
   a. Special anastomoses between centers so that stimulation is carried immediately from one to the other.
   b. Theory of irradiation, stimulation irradiates from one center to another.
   c. Special elasticity of certain arteries so that an increased blood supply in a given center is propagated to another.

3. Psychological theory: synesthesia due to associations, usually of strong emotional value, formed in early life.

C. ILLUSIONS.

An illusion is an inexact or inaccurate perception of an *actual* object or situation.

I. Passive Illusions are those which are determined by the nature of the sense organs and the environment, and are, therefore, experienced normally by everyone, as, for example, the two point threshold, the after effects of adaptation, double vision of a single object, the Aristotelian illusion, and the geometric optic illusions. These normal illusions will not be considered further here.

II. Active or Apperception Illusions, false interpretations of impressions, *due to a conscious expectation* resulting from habit or suggestion, or to a more or less *unconscious mental attitude* or nervous set.

1. Normal apperception illusions are frequent in everyday life.
2. Abnormal apperception illusions are found in various mental diseases in which the conditions are especially favorable for them: such conditions, for example, as emotional excitement, poor judgment, active imagination, etc.
   a. Visual illusions, often lead to mistaken identity of patient's attendants and others.
   b. Auditory illusions, voices are heard in creaking doors, footsteps, etc.
   c. Other illusions, such as gustatory and olfactory, are practically indistinguishable from hallucinations on the one hand and from the paresthesias of these senses on the other. (See Chap. II.)

III. Explanation of Apperception Illusions: the nervous impulse initiated by the stimulus flows from the sensory projection field into *wrong elaborative or associative channels*, that is, into paths which because of the present nervous set offer the least resistance but which do not lead to a correct reaction to the situation. There is probably a *relative dissociation* of the proper or habitual paths by their relatively stronger synaptic resistances.

D. HALLUCINATIONS.

A hallucination is a perception without any external object, while an illusion is a false interpretation of an *actual object*. This

distinction, originally made by Esquirol, is only arbitrary, and has been denied by recent theory.

I. The Kinds of Hallucination. Hallucination may be of a single sense or of *several* at once. The latter combined hallucinations are similar to dreams, and are always accompanied by the so-called clouded or dream-like consciousness.

1. Auditory hallucinations are usually *phonemes*, i. e. verbal hallucinations or "Voices," and the words heard are frequently *neologisms*.
   a. The "Epigastric voice," an internally localized voice.
   b. "Attack" and "Defense" voices, voices are heard accusing and defending the patient.
   c. Double thought, the exteriorization of thought, "Gedankenlautwerden," the patient hears his own thoughts spoken by another voice.
   d. The "Soundless voice" or voice of conscience, sometimes called a *psychic hallucination* because apparently midway between imagination and hallucination.
2. Visual hallucinations may be of absent friends or relatives, angels, god, the devil, snakes, insects, written words or other symbols, etc. In form they may be classified as follows:
   a. Stationary or moving.
   b. Stable or variable.
   c. Permanent or transient.
   d. Large, small, normal, or microscopic.
3. Hallucinations of taste and smell are usually disagreeable, e. g. poison in food, poisonous gases, filth, etc. May lead to refusal of food.
4. Hallucinations of pain are often described as prods, pricks, stabs, darts, electric shocks, etc.; or the patient may describe his experience by a neologism.
5. Kinesthetic or motor hallucinations. If these are weak, the patient may think he has moved or is moved when no actual movement has taken place; for example, he may feel as if raised from the bed or as if flying. If they are intense, the false sensation may be transformed into an actual involuntary movement; and the patient may ascribe this movement to *demoniacal possession* or some other influences. Two especially important kinds of motor hallucination follow.
   a. Verbal hallucinations, involving the muscles of articulation. If these are weak, the patient may think he speaks when he

does not, and mutism may result; if they are intense, the patient may actually speak involuntarily. This is called *logorrhea or* "The escape of thought."

b. Graphic hallucinations, involving the writing muscles of the hand, may result in involuntary or automatic writing.

6. Hallucinations of the cutaneous, organic, and labyrinthine senses are indistinguishable from the sensory paresthesias. The difference is always one of degree. When the false impression is given sufficient meaning, it is called a hallucination.

II. The Influence of Hallucination upon Other Mental Functions.

1. Attention. The hallucination as a rule cannot be resisted. It compels the attention of the patient.
2. Judgment. Sometimes the hallucination is recognized by the patient as pathological and unreal, in which case it may be called a *conscious, apperception, psychic, or pseudo-hallucination.* Usually, however, it is mistaken for a true perception, and its reality maintained against the testimony of the other senses by fantastic explanations. This can be explained only by supposing an intimate connection between hallucinations and delusions.
3. Affectivity. Hallucinations may be agreeable, disagreeable, or indifferent. Pleasant and unpleasant hallucinations may alternate in the same patient, as e. g., the *attack and defense voices.*
4. Reaction. If believed, the hallucination exerts a powerful influence on the conduct of the patient. A *voice* may, e. g., be immediately obeyed.

III. Theories of Hallucination.

1. The theory of secondary sensations. According to Sidis all hallucinations belong to the same order of phenomena as synesthesia, i. e. they consist of unusual and intense secondary sensations. This author defines *perception as a combination of primary and secondary sensations;* and in hallucination the secondary very much outweigh the primary in intensity, but the latter are never wanting. Normal perception, synesthesia, illusion, and hallucination represent merely four different degrees of intensity of the secondary in comparison with the primary sensations.
2. Centrifugal theories.
   a. Psychical: hallucinations are vivid memory ideas projected outward. This is the view of Griesinger, Taine, and many of

the older authors; and Kraepelin also has a group of "Apperception hallucinations" which he explains in this way. The following *objections* have been urged against the psychical centrifugal theory:

(*a*) There is a radical qualitive difference between intense images and sensations or perceptions; and

(*b*) This view is based upon the theory of "Eccentric projection," viz. that things are perceived in the brain and then projected outward. (See James's criticism.)

b. Sensorial or physiological: "Hallucination is cramp of the sensory nerves" due to heightened excitability of subcortical centers or to weakened cortical inhibition. The *objections* are as follows:

(*a*) It would have to be a *coordinated cramp* of many sensory nerves in order to explain the combination of sensation in the hallucination; and

(*b*) Refluent or efferent currents in the sensory nerves are questionable, and the response to such currents doubtful.

3. Centripetal theories. These tend as a rule to deny the validity of Esquirol's distinction between illusions and hallucinations.

a. Binet's "Point de repère" theory: there is always an external object, however small, to serve as a starting point for hallucination as for illusion.

b. The physiological conception of the *point de repère:* the afferent process may originate in the sense organ, sensory nerve, or even the sensory projection field, instead of being initiated by an external stimulus as in Binet's theory. Kraepelin explains his "Elementary sense deceptions" and "Perception phantasms" in this way; and the occasional occurrence of *unilateral hallucinations* seems to favor the theory. The main objection is that *afferent processes no matter how initiated can explain only the sensory character of the hallucination, and cannot account for its particular content or the fact that it is false.*

4. Dissociation theories. All the facts go to show that the hallucination occurs in a dissociated state (Parish); and *its content and falsity are no doubt due to this neural dissociation,* i. e. to a variation in synaptic resistance which results in the stimulus flowing into unusual cortical channels. Some form of dissociation is fundamental in the theories of Wernicke, James, Freud, et al.

a. Wernicke's theory of hallucination is based upon the hypothesis of "Sejunction," a temporary or permanent interruption

of the paths followed by the nervous impulse. The nervous energy thus accumulates above the lesion; and, if the accumulation is in *the psychosensory projection center*, it sets up an abnormal irritation resulting in hallucination.

b. James's theory is similar to Wernicke's. Perception and ideation have the same cortical localization; but in ideation the centers are not aroused to full activity, the stimulation is drained off to other centers. If the flow is blocked (dissociation), the nervous energy accumulates, reaches a maximum intensity, and hallucination results.

c. Freud's theory is based upon the activity of an unconscious mind. Hallucinations are *symbolical picturizations of repressed wishes*, that is, wishes dissociated by conflict with the personal consciousness. Freud's account is purely psychological, and from this standpoint may be correct. In other words, a dissociated consciousness may exist, and a hallucination may be a fulfilled wish; but this does not relieve one from the necessity of giving an explanation in neurological terms also.

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CHAPTER IV.

Consciousness and Attention.

A. Consciousness.

Consciousness in the traditional psychology has two (or more) levels: the clear focus, the obscure margin, (and the unconscious). The so-called disorders of consciousness may be understood with reference to these levels; but the actual condition of the patient would perhaps be more accurately described, if the term *behavior* or *speech* were substituted for consciousness.

1. Unconsciousnss,as in dreamless sleep, coma, or stupor.
2. "Clouded consciousness," a befogged state, as if the clear focus of normal consciousness had sunk to the level of the obscure margin. There is thus a poor apprehension of the external world (Kraepelin), and also a diminution of the mental synthesis (Wundt), i. e. a falling apart or disaggregation of the unity of consciousness. The actually observed phenomena are of course merely *confusion and incoherence of behavior*, as in delirium tremens and fever deliria.
3. Hyperconsciousness, the obscure margin is raised to the level of the center of maximal clearness. (?)

B. Attention.

Attention is the reaction or facilitation of the reaction to some stimuli with a simultaneous greater or less inhibition of the reaction to others; or in terms of consciousness it is the arrangement into clear and obscure levels.

I. Primary (instinctive) and Derived Primary (habitual) Attention, i. e. attention without effort (conflict) may show the following abnormalities:

1. Approsexia or hypoprosexia, inadequacy of attention.
   a. Inattention, the usual determinants or stimuli have completely or partly lost their power to produce attention, as in dementia and idiocy.
   b. Distractibility or mobility of attention, attention is too easily determined and its persistence or duration is below normal, as in mania.

2. Paraprosexia, the continuous fixation of attention upon a false or useless object without systematic or purposeful development of the object, as in fixed ideas, ecstasy, etc.
3. Hyperprosexia, the concentrated fixation of attention of the scholar upon the *useful and systematic development* of an idea or system of ideas—not pathological.

II. Secondary Attention results when there is a conflict of primary tendencies, and a characteristic feeling of effort arises.

1. Absence of the feeling of effort means primary attention, which may or may not be abnormal (as above).
2. An abnormal increase of the feeling of effort occurs when *the usual conflict of tendencies is exaggerated.* The attention then wavers, and decision seems impossible, as in psychasthenia.

III. Experimental Study of Abnormal Attention.

1. Lengthening and variability of reaction times have been reported in many studies of disordered attention; but sometimes the time is shortened showing an increased automatism. (See Vaschide et Meunier).
2. Abnormal variations in the span and duration of attention have not been studied experimentally.

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CHAPTER V.

Memory.

A complete memory depends upon the following four factors: (a) impression or fixation, (b) conservation or retention, (c) reproduction or revival, and (d) localization in the past which along with the feeling of familiarity constitutes recognition. A disorder of memory is based upon disorder of one or more of these factors.

I. Amnesia, Loss of Memory, abnormal forgetting, may be *general* or *partial*, in other words may involve all ideas and actions or may be limited to some special memories, e. g. numbers, names, special events, or periods of life, etc.

1. Anterograde amnesia, amnesia of fixation, usually by *default of attention*, events are not remembered because they were not adequately perceived in the first place or did not fulfill some other condition of fixation.

2. Retrograde amnesia, loss of memory in the usual sense of forgetting previously acquired ideas or actions. Ribot's "*Law of Regression*" applies to retrograde amnesia, i. e. the amnesia "Descends progressively from the unstable to the stable," recent events are forgotten before remote, ideas before actions, etc. The so-called *retroactive amnesia*, which follows a mental or physical shock, is a special case of the "Law of Regression;" for the amnesia extends backward before the date of the shock, i. e. the impressions received last and, therefore, not firmly "Set" are eliminated. There are two forms of retrograde amnesia depending upon the aspect of memory involved.

   a. Amnesia of conservation, the forgetting is based upon an actual fading out and loss of the memory ideas or habits, because of *actual changes, biotrophic or pathological, in the nerve cells.* The memory traces are thus obliterated, and the forgotten event can never be recalled.

   b. Amnesia of reproduction, the forgetting is merely inability to recall ideas or habits which are actually retained. Psychologically, *the memory ideas are dissociated from the personal consciousness;* and the amnesia is, therefore, usually *periodic* or *temporary*, i. e. groups of associated ideas are forgotten

alternately, or the forgotten events are later recalled. Neurologically, there are no actual brain cell changes; but groups of neurones are *dissociated* as a result of variation in synaptic resistance; and they may function independently,—the *co-consciousness* of Prince.

3. Amnesia of recognition, the idea is both retained and reproduced; but the associated ideas which constitute the meaning are not aroused (See Imperception above), and in certain cases a "Feeling of strangeness" or unreality may occur in place of the *feeling of familiarity* in normal recognition.

II. Hypermnesia, Exaggerated Memory.

1. General, involving all or many events of the past life, as frequently in mania, before death (it is said), or following emotional shock.
2. Partial, revival of isolated impressions or groups of impressions, as a forgotten language, some incident of childhood, etc.

III. Paramnesia, Falsification of Memory, or Illusion of Memory. Strictly speaking this falsity of memory must always consist in the localization or past reference of ideas or percepts; for retention and reproduction cannot in themselves be false, and false impressions are considered under perception.

1. Simple paramnesia or fabrication, the localization of an image or idea in the wrong past. The idea may have been taken from a book, or elaborated in the imagination from elements of past experience.
2. Paramnesia by identification, illusion of recognition, or the "Illusion of having already seen," the *feeling of familiarity is attached to a novel perception*, which is consequently referred to the past.
3. Associated or suggested paramnesia, or retrospective falsification of memory, a misinterpretation of the past under the influence of a delusion or of the suggestive power of an idea.

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CHAPTER VI.

Association or the Sequence of Thought.

A normal sequence of thought depends upon the following factors: (a) the existence of ideas, (b) associative tendencies, (c) a normal balance of inhibitions and facilitations.

I. Disorders in the Sequence of Thought.

Disorders in the sequence of thought may be traceable to disorder of one or more of the above factors. It will of course be obvious that the actually observed disorder is always one of "Speech;" and this term may be used instead of "Idea" and "Thought" in the following descriptions, e. g. "Flight of speech," "Goal of speech," etc.

1. Paralysis of thought, an inhibition or actual *dearth of ideas* (especially of general concepts), and a consequent absence of or monotony in the sequence of thought.
2. Retardation of thought or "Thinking difficulty," characterized by lengthening of association time, and therefore decided slowness in the elaboration of ideas.
   a. Initial retardation, a long interval before response to question or stimulus.
   b. Executive retardation, slowness after response is initiated.
3. Flight of ideas, association is not really accelerated as the term implies; but the sequence of thought is characterized by *incessant changes in direction*, that is in "Goal idea;" and superficial associations, such as external and sound associations, predominate.
4. Circumstantiality or "Impartial redintegration," the interruption of the train of thought by *numerous digressions* regarding inessential details, the "Goal" is reached by a circuitous route, as in senility.
5. Desultoriness or incoherence, associations are eccentric and there is *no recognizable connection* between successive ideas, as in dementia precox.
6. Fixation of thought upon a given idea or group of ideas with relative *absence of sequence*, probably due to an abnormal relationship between inhibition and facilitation.

a. Persistent ideas, the *perseveration* of some meaningless idea or melody without much affective accompaniment,—frequent in normal life.

b. Imperative ideas, characterized by their *obsessive nature*, They force themselves upon the patient and preempt his attention; but their pathological character is recognized by the subject, who experiences a disagreeable feeling of subjection.

c. Fixed ideas, similar to the last except that they harmonize better with the other ideas of the patient, who does not regard them as pathological. Ambition is thus a fixed idea in normal life.

d. Autochthonous ideas, similar to imperative ideas, but the patient interprets them not as pathological but as *due to some malevolent external influence*, as forced upon him from without.

II. Experimental Studies of Abnormal Association.

1. The "Diagnostic Association Studies" of Jung deal with variations in the ordinary association reaction, which he considers indicative of *repressed emotional complexes*. The following are some of these "Complex indicators."

a. Delayed reaction to a stimulus word, or to the one following it.

b. Unusual reactions, egocentric or predicate reactions.

c. Repetition of the stimulus word, giving it with minor changes, or translating it into a foreign language.

d. Perseveration, response to a word previously given.

e. Superficial associations, naming object in sight, or rhyming.

f. No response.

g. Failure to reproduce the same response on repeating the experiment.

h. Emotional and other responses, such as: clearing the throat, gesture, stammering, sighing, weeping, laughing, surprise, etc.

2. Studies of Kent and Rosanoff on the "Frequency Index" of the associative response show that a marked frequence of rare and unusual responses is abnormal and may indicate mental disease.

III. Explanation of Abnormal Association.

1. Psychoanalytic explanation.

a. Delayed, unusual reactions, etc., are the result of the resistance against the emergence from the subconscious of a *repressed complex* associated with the stimulus word.

b. Fixed ideas are "Compromise formations" between repressed and repressing ideas. There is *displacement of affect* from the repressed complex to some harmless substituted idea.

2. Neurological explanation. The neural basis of all disorders of association (and therefore also of memory and judgment) may be conceived as either (a) *abnormal variations of synaptic resistances*, or (b) *some destructive cortical process.* In either case there would result on the one hand unusual blocking, on the other unusual irritability of the associative pathways, and in (b) permanent loss of ideas.

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CHAPTER VII.

Judgment or the Validity of Thought (and Belief).

Judgment has been defined as the "Ascription of meaning to the given," the reference of a particular to a general concept, or in psychological terms as *the arousal of associated ideas;* and the truth or falsity of a judgment depends upon the appropriateness, suitability, or adequacy of these association in any given situation. Belief is a "Bye-product" of judgment. If only one group of associations is aroused by a situation, belief follows; if two or more incompatible groups, doubt and indecision. Just what associations will be aroused in any given situation depends upon habits and temperament; and these are therefore the real determinants of our judgments and beliefs. Proofs and reasons are usually *rationalizations,* in other words psychological camouflage for the *real motives of belief: habits and feelings.*

I. Poor Judgment or weak judgment occurs when the associations are not so much inappropriate as insufficient, as in childhood and in mental defect.

II. False Judgment (and belief) arises when the situation elicits inappropriate associations, which nevertheless fit in with the emotional setting or habits of the subject and consequently meet with no opposing associates. Such false judgments occur frequently in normal life, and many so-called normal beliefs differ only in degree from the delusions of the insane. An insane delusion may be characterized, according to White, in the following way: (a) it is not true to facts, (b) it cannot be corrected by appeal to reason, (c) it is out of harmony with the individual's education and environment. Delusions have been classified in the following ways:

1. Temporal aspect.
   a. Fixed. cf. fixed ideas.
   b. Changeable.
2. Interconnection and logical appearance.
   a. Systematized, forming a more or less logical system so that they seem rational and may be mistaken for fact by the uninitiated observer.

b. Unsystematized, disconnected, or not logically related to other ideas reported by the patient.

3. Relation to personality.
   a. Endogenous, the delusion is merely the unfolding of a type of personality, viz. the suspicious or conceited type.
   b. Exogenous, the delusion is engrafted upon the personality and has no apparent connection with it. Hence the patient on recovery cannot understand how he could have believed such things.
4. Reference to self or environment.
   a. Allopsychic, referring to the outside world or to other persons, as delusions of persecution.
   b. Somatopsychic, referring to the patient's own body, as the delusion that he has no stomach, that his heart is displaced, etc.
   c. Autopsychic, referring to the patient's personality, as delusions of grandeur or of sin.
5. Content of the delusion.
   a. Melancholy delusions, the patient is humble and passive in the following forms:
      (*a*) Delusions of self-accusation, humility, and culpability.
      (*b*) Nihilistic delusions, delusions of ruin and negation. The patient thinks he is bereft, has no means of support, no heart, no stomach, etc.
      (*c*) Hypochondriacal delusions, delusions of mental or physical disease.
   b. Delusions of persecution, the patient is usually depressed, but may be either *active* or *passive*.
      (*a*) Hallucinatory delusions, accusing voices or other hallucinatory experiences are intimately connected with the delusional system.
      (*b*) Delusions of reference, the patient misinterprets ordinary occurrences in his environment as referring to himself.
      (*c*) Delusions of jealousy may be classed here, the patient misinterprets even the most insignificant actions as evidences of infidelity.
   c. Delusions of grandeur, expansive delusions, or *megalomania*.
      (*a*) Absurd and unsystematized delusions, showing a degree of intellectual enfeeblement, as in paresis.
      (*b*) Well systematized delusions, usually of a religious or amorous nature, as in paranoia.
      (*c*) The delusion of mental soundness, or *lack of insight* into one's condition, may also be classed here.

III. Explanation of Delusions.

1. According to Kraepelin insane delusions originate in emotional disturbance, clouding of consciousness, or mental deterioration or defect. It is probable that the function of these factors is to remove inhibitions and thus permit more *infantile habits of thought, childish phantasies and wishes,* to express or assert themselves. (Freud.)
2. According to Adler delusions of grandeur and persecution are *psychical compensations* for an original feeling of inferiority. Cf. also Haines's report of a case where the delusion of persecution appeared to be a defense reaction against a "Feeling of inadequacy."
3. Southard produces evidence which suggest that:
   a. Somatopsychic delusions depend upon actual disorders of the soma, and are therefore usually more true than false.
   b. Autopsychic delusions are correlated with frontal lobe lesions in general paresis and in senility.
   c. Allopsychic delusions are usually in some sense autopsychic.
   d. Unpleasant delusions are frequently associated with renal and pleasant with pulmonary affections.

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CHAPTER VIII.

Orientation.

Orientation in the broadest sense implies a correct notion of the environment, of the self, and of the relation of the self to the environment; and it depends upon adequate perception, memory, and judgment.

I. Disorientation may, therefore, be due to:

1. Disorder of perception, such as general imperception, clouding of consciousness, or apathetic inattention.
2. Disorder of memory, amnesic or paramnesic.
3. Disorder of judgment, delusions as to self or environment.

II. The Forms of Disorientation:

1. Autopsychic, false or inadequate notion of the self, usually delusional or amnesic. (Wernicke.)
2. Allopsychic, false or inadequate notion of the environment in any one or all of its aspects.
   a. Spacial disorientation, the patient does not know where he is now, and may not even know where he formerly lived, where the sun rises and sets, etc. This form is usually due to clouding of consciousness, or apathy, but it may also be amnesic or delusional.
   b. Temporal disorientation, the patient does not know the time, the date, or even how old he is, when he was born, etc. This form is usually amnesic or delusional.
   c. Personal disorientation, the patient does not recognize persons about him: the doctor, nurse, members of his family, etc. this form may be perceptual, amnesic, or delusional.

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CHAPTER IX.

Feeling, Mood, and Temperament.

The various affective phenomena show not only marked individual differences but also extreme variations within the same subject at different times; and consequently it is often difficult or impossible to decide whether an affective reaction to a given situation should be considered as normal or abnormal. Féré proposes the following criteria of a pathological emotion or feeling: (a) extraordinary intensity of the physiological accompaniments, (b) insufficient determining cause, and (c) unusual persistence.

I. The Simple Feelings of pleasantness and unpleasantness, tension and relaxation, etc., may show the following disorders:

1. Exaggeration of feeling.
   a. Pleasantness exaggerated in euphoric and maniacal conditions.
   b. Unpleasantness exaggerated (*psychalgia*) in depressed and melancholic states.
   c. Tension exaggerated in apprehensive and anxious states.
   d. Excitement exaggerated in manic and delirious states, causing restlessness.
   e. Relaxation and quiescence may also be exaggerated, as in manic stupor, ecstasy, religious exaltation, etc.
2. Loss of feeling, apathy, or morbid indifference, an abnormal diminution of feeling. The patient may be aware of his loss or he may be quite unconscious of it. According to Ribot *feeling deteriorates like memory from the unstable to the stable*, i. e. from the higher to the lower; and the decay of the higher types is accompanied by loss of control and a consequent *apparent increase and variability* of the lower feelings. In the process of deterioration the feelings disappear in the following order: (a) disinterested feelings, intellectual and aesthetic; (b) altruistic feelings, moral and social; (c) ego-altruistic feelings, sexual, religious, ambitious; (d) egoistic, defensive and self-preservative.
3. Perversions of feeling, the feeling response is not suited to the situation, but often the exact opposite of what should occur.

a. The "Pleasure of pain," pleasure paradoxically aroused by one's own physical or mental suffering, as in martydom. (Ribot.)

b. The "Pain of Pleasure," unpleasantness aroused by normally pleasant experiences, as in religious asceticism, pessimism, etc.

c. Intrapsychic ataxia, or noo-thymopsychic ataxia, a dissociation between the intellectual and affective attributes of the personality, so that *the feeling responses do not fit the situation.* (Stransky, Bleuler.)

II. The Sense-feelings: fatigue, hunger, nausea, etc.

1. The feeling of fatigue, normally a fairly accurate index of the physiological condition, may be exaggerated or diminished. In the former case *the patient feels tired without adequate cause,* as in neurasthenia; and in the latter case the feeling of fatigue does not arise and there is consequent danger of overwork, as in mania.

2. Nausea, hunger, etc., have been classed under sensation, Chap. II.

III. Emotion is closely related to instinct. It is variously regarded as an aspect of instinct, as based upon instinct, or as itself a kind of instinct. The disorders of emotion will therefore be considered with the disorders of instinct in the following chapter.

IV. Mood may be regarded as a persistent feeling tone of rather weak intensity, and temperament is the mood of a life time or the *susceptibility to certain kinds of emotive response.* The following abnormal moods or temperaments may be regarded as exaggerations of certain normal types.

1. Euphoria, an exaggeration of the sanguine or optimistic temperament. In *passive euphoria* there are feelings of pleasantness, calmness or quiescence, and extreme self-confidence; in *active euphoria* calmness is replaced by excitement.

2. Depression or morbid sadness, an exaggeration of the melancholic or pessimistic temperament, characterized by unpleasantness and lack of confidence. If the feeling of tension is added to the syndrome, there results an anxious, fearful, or *apprehensive mood.*

3. Irritability or irascibility, an exaggeration of the choleric temperament, characterized by unpleasantness, excitement, and tension (as in anger).

Exaggeration of the phlegmatic temperament in the form of excessive tranquility and calmness is rarely considered abnormal.

The apathetic mood or temperament is characterized by *morbid indifference.*

Seclusiveness is characteristic of the bashful retiring type of personality that shrinks from all contact with life. The subject is "Shut-in" and inaccessable.

. Cyclothymia, an alternation of euphoric and depressive moods. The patient passes from the heights of exaltation to the depths of despair.

8. Morbid frivolity or superficiality of feeling, an extreme instability of emotional life. Feelings are easily aroused and just as easily forgotten. Hence, the patient passes rapidly from one feeling to another. This has been called the "Spasmodic diathesis," and "Psychological infantilism." (Ribot.)

9. Fanaticism, an exaggeration of some special feeling such as the religious or sexual. This completely dominates thought and action and renders the subject incapable of unbiased judgment.

V. Sentiment is the highest and most complex stage of affective development. It is "An organized system of emotional tendencies centered about some object" or concept like the True, the Good, or the Beautiful. (McDougall.) This affective organization is chiefly a matter of training.

1. Intellectual sentiment. See judgment and belief, Chap. VII.
2. Esthetic sentiment. This like other mental phenomena may be weak, absent altogether, or perverted. (cf. Cubism).
3. Religious sentiment. This also is sometimes weak or absent, but more interesting is its frequent abnormal exaggeration. In the latter case it may lead to voluntary submission to physical or mental torture, renunciation of all social pleasures, fasting, etc.
4. Moral sentiment. This is by far the most important sentiment socially, and its abnormality is consequently more serious.
   a. Absence or weakness of the moral sentiment, resulting in morbid dishonesty, lying, swindling, and other immorality, is due in part to faulty emotional endowment, but chiefly to *bad training or lack of the intelligence necessary to benefit by training.* Deterioration of a previously well developed moral sentiment occurs often very early in the various dementias, so that immorality may be the first symptom.

b. An exaggerated moral sentiment occurs as *over-conscientiousness* in many neurotics.

VI. Explanation of Abnormal Feeling. Many theories and suggestions have been advanced, but none of them is entirely satisfactory.

1. Psychological theory. The morbid feeling is the affective accompaniment of an unconscious idea. The idea has been repressed, while the feeling has remained "Floating" or has attached itself to another idea. (Freud.)

2. Physiological (somatic) theories.
   a. Unpleasant feeling is often associated with somatic disorders below the diaphragm, pleasant with disorders of the thorax (Southard), and loss of feeling with visceral anesthesia (d'Allonnes).
   b. Recent work suggests that disorders of feeling and emotion may be due to disorder of glands of internal secretion. (Cannon.)

3. Neurological theories.
   a. Apathy due to cerebral anemia, increase of feeling to cerebral congestion, and the pleasantness or unpleasantness of the exaggerated feeling to coexistent somatic condition. (Féré.)
   b. Pleasantness due to ease of discharge of nervous impulse, unpleasantness to obstruction of such discharge; i. e. facilitated reactions are pleasant, inhibited unpleasant. (Ziehen.) The frequency of thalamic disorders in patients with emotional disturbances is significant from this point of view; for a pathologically simplified or obstructed thalamus would modify the reactions in the way demanded by the theory. (Southard.)
   c. Conduction by neurological units in readiness to conduct is *satisfying*, while conduction by units in unreadiness and readiness without conduction are *annoying*. (Thorndike.)

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CHAPTER X.

Instinct and Emotion.

Instinct may be characterized as follows: (a) it is inherited, (b) it is compound reflex action (Spencer), (c) it is response to a more or less specific object or situation, (d) it usually has an emotional accompaniment.

A. Classification.

The following is a list of the principal instincts, their correlative emotions, original excitants, and most frequent abnormal forms. (McDougall). In general each of these instincts and emotions may be *abnormally decreased, increased, or elicited by an unusual object.* The abnormalities of fear and the sex instinct are so important and so varied that they require special consideration.

I. Instincts with Well-defined Emotional Accompaniments.

Instinct	*Emotion*	*Natural Excitant*	*Abnormal Form*
1. Flight or concealment	Fear	Strange objects, loud sounds, darkness, etc.	The Phobias
2. Repulsion	Disgust	Noxious substances	Excess or lack
3. Curiosity	Wonder	The slightly unfamiliar	Inquisitiveness
4. Pugnacity	Anger	Opposition to any other instinct	Quarrelsomeness and uncontrollable anger
5. Self-abasement	Subjection or negative self-feeling	Presence of supposed superior	Lack of confidence
6. Self-assertion	Elation or positive self-feeling	Presence of supposed inferior	Egotism, megalomania
7. Parental	Tender emotion	The child, especially if in distress	Substitution of false objects
8. Reproduction	Sexual love	Opposite sex	Sex perversions, etc.

II. Instincts with Less Well-defined Emotional Accompaniments.

1. Gregarious	Restlessness when alone	Other members of same species	Agoraphobia, Monophobia
2. Acquisition	?	Anything of value	Kleptomania, collecting the useless
3. Construction	?	?	Useless inventions, etc.
4. Hunting	?	?	Some forms of cruelty (?)
5. Feeding	Appetite (?)	Food, when hungry	Gluttony, perverted tastes, etc.

B. Fear.

I. The Abnormal Fears are all characterized by their intense and irrepressible but unreasonable nature. According to Boris Sidis fear is the basis of all psychopathic diseases.

1. General fear or panophobia, fear with no particular object, as in apprehensive and anxious states.

2. Special fear or phobia, exaggerated fear aroused by some particular object. Since fear is the *great inhibitor of action*, the phobias may be regarded as specific inhibitions.
   a. Acrophobia, fear of high places.
   b. Agoraphobia, fear of open places.
   c. Algophobia, fear of pain.
   d. Anthropophobia, fear of men or of some particular man.
   e. Astraphobia, fear of thunder or of other meteorological phenomena.
   f. Claustrophobia, fear of closed places, opposite of agoraphobia.
   g. Ereutophobia or erythrophobia, fear of blushing.
   h. Gynophobia, fear of women or of some particular woman.
   i. Hematophobia, fear of blood.
   j. Misophobia, fear of contamination.
   k. Monophobia, fear of solitude.
   l. Nyctophobia, fear of the darkness.
   m. Pathophobia, fear of disease or of some particular disease (e. g. syphilis).
   n. Phobophobia, fear of fear, i. e. fear that one will be afraid.
   o. Taphephobia, fear of being buried alive.
   p. Thanatophobia, fear of death.
   q. Toxophobia, fear of poisons or of being poisoned.
   r. Zoophobia, fear of animals or of some particular animal (often insects).

II. Explanation of Abnormal Fear.

1. Freud.—All phobias begin as panophobias, and their attachment to specific objects is secondary. *This panophobia is the expression not of fear but of a sexual prohibition.* It is the substitute for the reproach affect, which compensates for a repressed sexual childhood experience.

2. Prince.—A phobia whether general or specific is not so irrational as it seems. *It bears a logical relation to a subconscious complex.* In general fear or anxiety only the physical disturbance and emotion are conscious, while the idea and meaning are functioning subconsciously; in specific phobias the idea also is conscious, while its meaning or setting is still subconscious (either unconscious or coconscious); and, finally, in some cases a partial meaning may also be conscious. An analysis of the meaning leads back to fears and self-reproaches of past, often early childhood experiences.

3. Sidis.—Phobia is the *direct outcome of the fear instinct of early childhood* fostered by frights, punishment, religious instruction, social taboo, etc. The childhood experience recedes from conscious memory into the subconscious and becomes dissociated, while the fear developes and extends according to the principles of proliferation, fusion, contrast, irradiation, differentiation, metathesis, etc.

C. SEXUAL INSTINCT.

The sexual instinct, according to Freud, is the chief etiological factor in all neuroses. Its aberrations are, therefore, of very special importance.

I. Anomalies of degree.

1. Anesthesia sexualis, i. e. sexual frigidity.
2. Hyperesthesia sexualis or eroticism:
   a. Satyriasis in man.
   b. Nymphomania in woman.

II. Qualitative Anomalies (Paresthesia Sexualis). It is important in all these cases to disguish between actual *perversion* and mere *perversity.*

1. Deviations in respect to the sexual object.
   a. Autoeroticism or autosexuality, the sexual object is by preference one's own body.
   b. Narcissism, the sexual object *may be* of the same or opposite sex, but must resemble the subject. In other words, the love object is the *self* or *Ego* as reflected in others. (cf. the Narcissus Myth.)
   c. Homosexuality or sexual inversion, the sexual object is of the same sex. *There is a contrast between the physical and psychical sex of the subject.*
      (*a*) Psychosexual hermaphroditism or bisexuality, the object may be of either sex.
      (*b*) Exclusive selection of the same sex.
      (*c*) The whole mental make-up may become that of the opposite sex in harmony with the sexual feeling. This is called *effemination* in man, *viraginity* in woman.
      (*d*) The form of the body may also approach that of the opposite sex. This is known as *Androgyny* in man, *gynandry* in woman.
   d. Bestiality or zooerasty, the sexual object is an animal.

e. Pedophilia erotica or pederasty, the sexual object is an immature child.

f. Necrophilia, the sexual object is a cadaver.

2. Deviations in respect to the sexual aim.

a. Deviations in aim dependent upon "Over-valuation" of the sexual object. Certain aspects or associates of the love object have an intense, biologically unwarranted emotional appeal.

(*a*) Anatomical transgressions, utilization of some part of the body other than that intended for the sexual union.

(*b*) Fetichism, deviation of the sexual aim because of the substitution of an associated object for the real sexual object, e. g. foot, hair, glove, shoe, handkerchief, lingerie, etc.

b. Deviation in aim due to overvaluation of the "Fore-pleasures." There is fixation of the precursory or preparatory sexual aims such as looking and touching. The most frequent abnormalities here are *active and passive exhibitionism.*

c. Algolagnia, the exaggeration of the little understood *pain-cruelty component* of the sexual impulse.

(*a*) Active algolagnia or *sadism* is the gratification of sexual desire by inflicting pain.

(*b*) Passive algolagnia or *masochism* is the gratification of the sexual instinct by suffering pain.

In both cases the pain may be physical resulting in the *mutilation* of the victim or the subject; or psychical resulting in the so-called "*Symbolic*" sadism or masochism. Both active and passive algolagnia are usually found in the same subject with one or the other more strongly developed, and they are often combined with perversions in respect to the object.

III. Paradoxia Sexualis, sexual instinct manifested outside of the period of anatomico-physiological processes in the generative organs.

1. Premature development of the instinct, resulting in sex manifestations beyond the age of the child.

2. In old age especially in dementia senilis there is often a reawakening of sexual libido accompanied by impotence and consequent perverted acts.

IV. Explanation of Sexual Aberration.

1. As etiological factors some authorities place the emphasis on heredity, others on early childhood experiences.

2. Freud's view is a compromise: the sex abnormalities are anomalies of development. Every child is at first "Polymorphous perverse," or has the potentiality for any possible perversion. Influences that emphasize some "Partial component" of the sexual instinct may lead to the various deviations in respect to the aim, while deviations in respect to the object are for the most part *fixations of development* at some infantile stage; for every child passes through autosexual, narcissistic, and homosexual (or rather bisexual) stages before attaining normal heterosexuality. This fixation of development is in part due to experience, but probably also to an inherited "Psychosexual constitution."

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CHAPTER XI.

Innate Action and Its Mechanism.

This chapter sums up the main disorders of the motor mechanism of interest to the psychologist, and also the disorders of reflexes and other forms of innate behavior not included under Instinct. (See Chap. X.)

I. The Motor Mechanism, including the muscles and the motor neurones.

1. Muscle tonus, the normal state of continuous partial contraction of muscles, may show the following disorders:
   a. Hypotonia or atonia, decreased tonicity or loss of tonus.
   b. Hypertonia, myotonia, increased tonus and consequent difficulty in movement.
2. Paresis or amyosthenia, muscular weakness.
3. Paralysis, loss of function, particularly motor. Paresis may be regarded as an incomplete paralysis. There are three types of organic paralyses depending upon the locus of the neural lesion: *upper motor neurone, lower motor neurone, and peripheral paralyses.*
   a. Monoplegia, paralysis of a single limb or other muscle group.
   b. Paraplegia, paralysis of the lower extremities.
   c. Hemiplegia, paralysis of one side.
   d. Diplegia, paralysis of both sides, double hemiplegia.
   e. Ophthalmoplegia, paralysis of eye muscles internal or external.
4. Tremor, may be general but usually involves particular muscles.
   a. Slow, or fast.
   b. Coarse, fine, or fibrillary.
   c. Regular, or irregular.
   d. Intention tremor, i. e. tremor only in the performance of voluntary acts.
5. Spasm, energetic involuntary contraction.
   a. Tonic, continuous.
   b. Clonic, frequently repeated.
   c. Cramp, painful spasm (e. g. tic douloureux).
6. Contracture, long continued tonic spasm.

7. Convulsion, widely distributed persisting tonic or clonic spasm with disturbed consciousness.
8. Athetosis, never-ceasing, tentacle-like movements of fingers or toes.
9. The trophic disorders. *atrophy*, *hypertrophy*, and *dystrophy*, are due to interference with the nutrition of the trophic centers.

II. The Reflexes and Their Disorders. In general any reflex may be abnormally *exaggerated*, abnormally *weakened*, or altogether *absent*. This is to be understood wherever disorders are not specifically mentioned.

1. Superficial or skin reflexes: abdominal, scapular, etc.
2. Tendon reflexes: knee, elbow, wrist, jaw, achilles, etc.
3. Clonus, a short clonic spasm produced by forcible flexion of certain joints: ankle, wrist, knee, etc. It is *always abnormal*.
4. The plantar reflex, flexion of toes and retraction of foot on stimulation of the sole of the foot. This reflex has the following abnormal forms:
   a. Babinski sign, extension of the great toe instead of above.
   b. Oppenheim, extension of toe on stimulation of inner border of tibia.
   c. Gordon, above extension elicited by pressure on the calf.
5. Pupil reflexes and disorders.
   a. Normal reflexes:
      (*a*) Light reflex, contraction to light, dilation in darkness.
      (*b*) Distance reflex, contraction for near vision.
      (*c*) Consensual reflex, pupil of one eye reacts to light stimulation of the other.
      (*d*) Sympathetic or celio-spinal reflex, dilation on rubbing skin of neck.
      (*e*) Pain reflex, dilation in intense pain.
   b. Abnormal reflexes: absence or sluggish reaction of any reflex. The so-called *Argyll-Robertson pupil* reacts to distance but not to light.
   c. Changes in shape of pupil, irregular pupils.
   d. Changes in size of pupils: *myosis*, *mydriasis*, and *inequality* of pupils.
   e. Other eye disorders: *ptosis* or drooping eyelid, and *nystagmus* or oscillation of the eye-ball.
6. Incoordination of muscular movement, ataxia.
   a. Static ataxia, failure to coordinate while at rest, as for example

swaying or falling when attempting to stand with the feet together and the eyes shut (The Romberg sign).

b. Mótor ataxia, incoordination in movement, as determined by the "finger to nose test," etc. (Cf. ataxic gait.)

III. Walking Disorders.

1. Paretic gait, slow, short, scraping, or shuffling steps, due to muscular weakness and stiffness.
2. Ataxic gait, stamping and sprawling, due to defective muscular sensation and incoordination. (Locomotor ataxia.)
3. Cerebellar-ataxic gait, staggering and swaying, or waddling with separated legs and tendency to stumble.
4. Steppage gait, high knee action with dangling foot and scraping toe. (Multiple neuritis.)
5. Hemiplegic gait, foot and leg rigid, and raised in walking by raising pelvis, and then swung from the hip in a semicircle.
6. Festination (of paralysis agitans), bowed body, trotting gait, short steps.
7. Astasia-abasia, inability to walk or stand, without paralysis or loss of control of the limbs for other movements. (Hysterical.)

IV. Explanation. These disorders are all fundamentally *organic* in nature, and differ only as to the nature and locus of the nervous disorder. They are, however, practically all imitated in the so-called *functional* diseases. Functional paralyses, tremors, spasms, and contractures are especially common. These functional disorders must have also some structural basis: probably a change in synaptic resistance, which brings about a temporary dissociation of a group of neurones resulting in a *systematized amnesia* for the function in question.

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CHAPTER XII.

Acquired Action or Habit and Conduct

This chapter sums up the various disorders of acquired behavior, as distinguished from the disorders of inherited behavior already outlined. The disorders of acquired behavior are classed under four heads, viz.: apraxia, other disorders of speech and writing, disorders resulting from an abnormal relation or balance of impulsion and inhibition, and disorders of will and character.

A. Apraxia.

Apraxia is the loss of ability to perform a skilled act in the absence of paralysis or ataxia. There are two distinct forms with different neural bases:

1. Motor apraxia, the patient knows what is to be done, but he cannot do it although he may wish to. Here the neural lesion is in the *motor area of cortex.*
2. Sensory apraxia, the sensory cue to action is missing, and therefore the patient does not know what is to be done. He has a sort of *amnesia.* This form is associated with mental blindness, mental deafness, or astereognosis; and the lesion is in the *sensory or association area of the cortex.*

There are also special forms of apraxia depending upon the function lost, that is, upon the muscles involved.

I. Aphasia, Loss of Ability to Use Articulate Language.

1. Broca's conception, aphasia always due to lesion in the left inferior frontal gyrus, i. e. always motor in nature (*aphemia*).
2. Wernicke's contribution to the study of aphasia:
   a. Distinction between motor and sensory aphasia. The former is loss of ability to combine articulatory movements into words, due to lesion in Broca's area; and the latter is loss of the auditory cue to speech, due to lesion in the left superior temporal gyrus. (*Verbal amnesia.*)
   b. Aphasia may be cortical, transcortical, or subcortical depending upon whether the lesion is located in the projection fields, between them, or in the projection pathways.
3. Marie's view of aphasia: all aphasia is of the sensory type, and should better be called *intellectual aphasia;* for there are always

other accompanying intellectual defects. When motor symtoms occur in aphasia, they are always due to subcortical lesion, probably in the lenticular nucleus.

II. Agraphia, Loss of Ability to Write, may also be either motor or sensory. The former is due to lesion in the left middle frontal gyrus, the latter to lesion in some sensory area that furnishes the cue for writing movements.

A wrong word or jargon may be substituted for the forgotten word in aphasia, and in agraphia. This phenomenon is called *paraphasia* and *paragraphia* respectively.

III. Amimia, and Paramimia are, respectively, the loss of ability to use gesture or expression, and the use of the wrong gesture or expression to convey the meaning.

B. OTHER DISORDERS OF SPEECH AND WRITING.

I. Speech Disorders.

1. Stammering and stuttering, due to *articulatory clonic spasm* and incoordination of speech muscles, especially delayed action of the laryngeal mechanism. This delay, according to Bluemal, is due to a "Transitory auditory amnesia" for the sound image of the vowel, i. e. for the vowel-color or quality. (For other theories see Fletcher. Ref. below.)
2. Lisping: negligent, organic, and neurotic varieties have been distinguished by Scripture.
3. Paretic speech. Paretic weakness and incoordination of the speech muscles may produce the following symptoms:
   a. Drawling, and indistinct speech.
   b. Tremulous speech, due to tremor of the articulatory muscles.
   c. Scanning speech, deliberate enunciation of each syllable.
   d. Omission of syllables or words.
   e. Reduplication of syllables.
   f. Interchange of syllables.
4. Paralytic speech, loss of speech or elements of speech due to paralysis of lips, tongue or larynx. This results from disintegration of the motor nuclei in the medulla: *progressive bulbar paralysis.*
5. Agrammatism, marked disorder in syntax, frequent in idiocy.
6. Aphonia, whispered speech, as in depressed states, hysteria, etc.
7. Mutism, complete inability or refusal to speak in the absence of paralysis or aphasia. (See negativism below.)

8. Echolalia, parrot-like repetition of words or sentences heard.
9. Verbigeration, continuous repetition of the same phrase or sentence. (See stereotypy.)
10. Logorrhea, extreme garrulity, as in mania.
11. Kaprolalia, excessive use of obscene words.
12. Pseudolalia, the production of meaningless sounds.
13. Neologisms, new words created by the patient and given a meaning.

II. Writing Disorders.

1. Tremor in writing, may be fine or coarse.
2. Paretic writing, untidy blotted writing, and omission, reduplication, and interchange of letters or syllables.
3. Pseudographia, production of meaningless written symbols.
4. Graphorrhea, continuous writing, usually in large and showy characters.
5. Small, cramped writing, as in depressed states.
6. Writing overemphasized by numerous underlinings, as in hysteria.
7. Writer's cramp, a functional disability to write because of tremor, spasm, pain, or paralysis of the hand whenever the pen is taken up.
8. Mirror writing, and inverted writing sometimes occur spontaneously in the feeble-minded and degenerate.
9. Automatic writing, writing not under the control of the main personality, that is, dissociated from the personal consciousness (hysterical).

C. INHIBITION AND IMPULSION

Disorders due to an abnormal relationship between impulsion (facilitation) and inhibition, that is to say, between instincts and *action habits* on the one hand and *control habits* on the other. Either impulsion or inhibition may be deficient or excessive, and hence there are four main possibilities.

I. Deficient Impulsion, a form of *abulia*, i. e. weakness of will.

1. General, involving all tendencies, the so-called paralysis of the will, *anergia* or *apathy*.
2. Specific, abnormal weakness of some particular tendency, instinct or habit.

II. Excessive Inhibition, another form of *abulia.*

1. General inhibition, varies in degree from partial to complete resistance to action. In the former case there results a "Psychomotor retardation," which may be initial, executive, or both; and from the *conflict of tendencies* there arises an exaggerated *feeling of effort;* while in the latter case all movement is annulled.
2. Specific inhibition (systematized abulia) the resistance arises as a counter-impulse *for some one specific tendency* or for each tendency as it originates. This is the so-called "Blocking of the will" or "Embargo upon the will." It may be called a *negative* or *contra-suggestibility,* for the stimulus to action may be regarded as an internal or external suggestion.
   a. If the counter-impulse is the stronger, there results an active *negativism,* e. g. mutism, muscular tension and "Spring resistance," and *heterokinesia* or doing the exact opposite.
   b. If the counter-habit or impulse is delayed or not completely antagonistic to the original, there results a peculiarly modified reaction because of the *interference.* Here belong the so-called "Derailment of the will," some mannerisms, and probably also the synkinesia and allokinesia of Janet.

III. Excessive Impulsion (hyperbulia).

1. General "Pressure of activity," or psychomotor excitement, may result in coherent or incoherent action depending upon the degree of dissociation also present.
2. Specific impulsion, involving some particular instinct or habit. Here belong the so-called manias: kleptomania, pyromania, dipsomania, siteomania, phaneromania, caprolalomania, and sexual and homicidal manias. These manias are of two types:
   a. Impulsive manias, which are similar to fixed ideas, i. e. are regarded by the patient as belonging to himself, and normal.
   b. Compulsive manias, which are like imperative or autochthonous ideas, i. e. the patient regards them as pathological or parasitic, or as forced upon him from without perhaps by some malevolent power.

IV. Deficient Inhibition.

1. General, every impulse flows quickly into action, as e. g. in childhood, the southern type of individual, and mild alcoholic intoxication.

2. Specific, tendencies to action meet with no controlling tendency. There is thus an *increased susceptibility to external and internal stimuli.* (Kraepelin's "Heightened susceptibility of the will.")
   a. Increased susceptibility to external influences, *hyper-suggestibility.*
      (*a*) Cerea flexibilitas, limbs retain the position in which they are placed. This "Catalepsy" may be *partial,* i. e. effecting only some muscles, or *complete.*
      (*b*) Echopraxia (including echolalia), imitation of acts and speech of others.
      (*c*) Command automatism, commands are automatically obeyed.
   b. Perseveration of internal stimuli, *auto-suggestibility.*
      (*a*) Stereotypy of posture or attitude, even the most uncomfortable position may be retained for a long time.
      (*b*) Stereotypy of movement, endless repetition of the same action. (Some mannerisms belong here).
      (*c*) Stereotypy of language or *verbigeration,* continuous repetition of particular words and phrases.

V. Reaction Time in the Insane and Neurotic.

1. Lengthening of the reaction time is the most frequent anomaly; but it is sometimes shortened, indicating increased automatism.
2. The increased *variability of reaction time,* especially discrimination time, is more noteworthy than its lengthening. It indicates a weakening of the attention.

D. WILL AND CHARACTER

I. Will may be psychologically defined as the feeling of effort which accompanies actions of the secondary attention type, i. e. actions resulting from a conflict of tendencies.

1. This feeling of effort may be absent, in which case the action may be normal or abnormal (as above).
2. The feeling of effort may be exaggerated by a *conflict* of approximately equal tendencies, and decision or action thus delayed or impossible, as in some of the excessive inhibitions above.

II. Character may be defined as the sum-total of reaction tendencies: habits and instincts.

1. In a strong character these tendencies are organized into a synthesis or hierarchy, in which the single tendencies are subor-

dinate to the main tendency. Such a character implies a well-developed moral sentiment (See Chap. IX).

2. In a weak character there is complete absence of or defective organization; so that the various reaction tendencies *conflict* or bear no logical relation to each other. Such a *defective organization* explains the occurrence of delinquency in the intelligent.

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CHAPTER XIII.

Intelligence.

I. The Concept of Intelligence.

1. General adaptability to new problems and conditions of life (Stern).
2. Intelligence as a common central factor which participates in all sorts of mental activities (Spearman).
3. Intelligence as the sum-total of specific abilities (Thorndike).

II. Methods of Measuring Intelligence.

1. Individual examination methods.
   a. The Binet-Simon scale and its modifications: the Goddard revision, the Stanford revision, the Yerkes-Bridges point scale.
   b. The performance tests: the Healy-Fernald tests, the Pintner-Paterson performance scale, the army performance scale.
2. Group examination methods.
   a. The Otis group intelligence scale.
   b. The army examination for literates (Alpha).
   c. The army examination for illiterates (Beta).

III. The Measures of Intelligence.

1. Mental age, a rating of the performance of an individual in terms of the chronological age of a year group of children whose median performance equals the subject s.
2. Intelligence quotient, mental age divided by chronological age.
3. Percentile rank, the percentage of individuals (of the same age, if children) whom the subject exceeds in intelligence.

IV. The Distribution of Intelligence conforms to the normal or symmetrical curve. Thus mediocrity predominates and there are equal numbers of supernormal and subnormal, the numbers decreasing gradually with the amount of deviation from the median.

V. The Classification of Intelligences is purely arbitrary. There is no dividing line between the groups, and each group is not homogeneous. The following is one of several proposed classifications. (Terman):

CLASSIFICATION		SCORE (I. Q.)
Genius, or near genius		Above 140
Very superior		120-140
Superior		110-120
Normal or average		90-110
Dull or backward		80-90
Border-line deficiency		70-80
Definitely feeble-minded:	(a) Moron	50-70
	(b) Imbecile	25-50
	(c) Idiot	Below 25

VI. Amentia or Feeblemindedness Distinguished from Dementia. The former is an *innate defect*, while the later is the result of a *mental deterioration.*

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CHAPTER XIV.

Personality.

Since personality is the *synthesis* of all so-called mental contents and reaction tendencies, every mental disorder is in a sense also a disorder of personality. This is especially true of memory disorders and disorders of *coenesthesia*, i. e. of bodily sensations; for these are the basis of consistency and unity in personality.

I. Absence or Weakness of Personality, due to depersonalization, i. e. loss of personality as in dementia, or to failure to develop personality, as in amentia. Here the deficiency is in both *content and synthesis.*

II. Transformation of the Personality, *change in content* rather than synthesis.

1. There is a normal change from childhood to old age, especially noteworthy at puberty and the climacteric, due partly to changes in coenesthesia and partly to experience.
2. Abnormal transformation is characteristic of all paranoid conditions, especially of the autopsychic type. It may be *complete* as in some cases of paranoia, *incomplete* as in paresis, or *alternating* as in manic-depressive insanity.

III. Dissociation of the Personality, *a disorder of synthesis.* The following are three degrees of complexity of the dissociated processes:

1. The dissociated memories and activities are not systematized, as in simple automatic writing, crystal gazing, and other simple *co-conscious* phenomena.
2. The dissociated memories are systematized, but do not constitute a separate personality or Ego. There is, however, subconscious fabrication or elaboration; and, hence, the automatic writing is an *apparently* new creation, as e. g. in Flournoy's case of Helene Smith.
3. The dissociated ideas constitute a personality more or less independent of the main personality, i. e. a new Ego, which may exist co-consciously (hypnoid state of Sidis), or alternate with the other Ego (hypnoidic state or resurrected personality of

Sidis). There may be more than two such personalties, e. g. Janet's Leonie, and Prince's Miss Beauchamp.

IV. The Schizophrenia of Bleuler is a sort of fragmentary dissociation, or shattering of the personality. The previously considered dissociation may be regarded as a more or less massive splitting, and schizophrenia as *a fragmentation of the psyche.*

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CHAPTER XV.

Sleep, Dreams, Hypnosis.

I. Theories of Sleep.

1. Circulatory: sleep due to cerebral anemia, a withdrawal of the blood supply from the brain resulting from dilation of the vessels of the skin consequent upon fatigue of the vasomotor center in the medulla.
2. Histological: sleep due to an amoeboid shortening of the dendrites (Duval), or to relaxation of neuroglia fibrils thus blocking the synapse. (Cajal.)
3. Chemical: sleep due to the accumulation of toxic waste products—an auto-intoxication (Preyer), or to the consumption of intramolecular oxygen and the consequent reduction in irritability. (Pfl¨ger.)
4. Psychological: sleep is the resting time of consciousness (Manacéine) brought about by elimination of stimuli, increase of the threshold of consciousness, ennui, etc.
5. Biological: sleep in an instinct evolved from the primitive rest state of animals to protect the organism against fatigue. (Claparède, Sidis, Coriat.)

II. Theories of Dreams.

1. The dream is a partial awakening, an arousal of relatively disconnected cells either as a result of spontaneous change in cell threshold or by means of internal or external stimuli. (Binz, Maury.)
2. The dream is a "Perseveration of the unadjusted," i. e. the working out of thoughts "Nipped in the bud" during the day. (Delage.)
3. The dream is an "Apperceptive trial and error," i. e. a series of attempts to interpret a stimulus. A completely successful attempt, a correct interpretation means a full awakening. (Horton.)
4. Freud's theory of dreams.
   a. The dream is a symbolical fulfilment of repressed infantile sex wishes (i. e. trends, tendencies, or instincts).

b. The *manifest content* of the dream is distinguished from the *latent content*, the dream thought, or actual trend fulfilled. Dream symbolism and distortion of the latent content are devices for evading the "Psychic censor," which is the mechanism that has inhibited or supplanted the aforesaid infantile trends.

d. The methods of dream distortion or dream work are as follows:

(*a*) Condensation, due to *over-determination* of the dream image. Each element in the manifest content has a number of meanings, is a composite picture, as it were.

(*b*) Displacement of affects from important to unimportant elements and *representation through the opposite.* These give the dream much of its nonsense and bizarre character.

(*c*) Dramatization and visualization (due to regression) result in a scenic presentation of the manifest content.

(*d*) Secondary elaboration is the attempt on the part of the conscious or foreconscious to make the manifest content intelligibile. It is similar to *rationalization* of motives in waking life.

5. The dream is autosymbolic, i. e. it represents or solves symbolically some *present mental conflict*—not necessarily sexual; and past, very often infantile, experiences are made use of figuratively in this solution. (Jung, Prince.) According to Adler the conflict thus represented is usually between a real or supposed inferiority and a wish for greater power or superiority.

III. Disorders of Sleep and Dreams.

1. Insomnia, may occur as broken sleep, wakefulness first part of night, or wakefulness last part of night. It is due to a variety of causes, such as neurasthenia, emotional excitement or shock, fixed idea of inability to sleep, pain, etc.
2. Somnambulism, an automatic motor activity, or *a form of mental dissociation* arising out of sleep. It has various degrees of complexity from talking in sleep to the most complicated acts.
3. Pavor nocturnus or "Night terrors" of children, nightmare, and the "Anxiety dream" are probably different degrees of the same thing, and indicate a nervous or neurotic condition.
4. Nocturnal enuresis, an automatic activity of the urinary mechanism during sleep, frequent in neurotic children, psychoneurotics, and epileptics.

5. Narcolepsy, irresistible attacks of drowsiness or somnolence, usually indicative of hysteria or epilepsy.
6. Hypnolepsy, the sleep state of longer or shorter duration between alternations of personality. (Sidis.)
7. Sleeping sickness, a condition of gradually increasing somnolent stupor terminating in death. Its cause is not definitely determined, but it is sometimes the terminal stage of trypanosome infection.
8. Nocturnal paralysis, transitory inability to move the limbs or open the eyelids in the hypnagogic or subwaking state.

IV. The Hypnagogic, Hypnoidal, Subwaking, or Twilight State between waking and sleeping or vice versa. This state is characterized by increased suggestibility, frequent hallucinations, and other automatic phenomena. Its duration varies greatly in different individuals.

V. The Hypnotic State.

1. Conditions of hypnotism.
   a. Concentration of the attention upon the stimuli used by the hypnotist.
   b. Expectation of the result by the subject.
   c. Emotional indifference as to the consequences.
   d. Some form of monotonous stimulation.
2. Characteristics or symptoms of the hypnotic state.
   a. Rapport, the state of dependence of subject upon operator.
   b. Amnesia in the trance for some past events, hypermnesia for others; and amnesia afterwards for events of the trance.
   c. Suggestibility, and loss of initiative.
   d. Paralysis, contracture, catalepsy, and other effects on voluntary muscles produced by suggestion.
   e. Illusions, hallucinations, and delusions.
   f. Anesthesia and hyperesthesia. The anesthesia is frequently systematized, resulting in *negative hallucination*, especially of the visual sense.
   g. Post-hypnotic phenomena, suggestions given during the trance are carried out after waking.
3. Theories of hypnotism.
   a. The animal magnetism theory: the passage of a force or magnetic fluid from operator to subject. (Mesmer.)
   b. The neurosis theory: hypnosis is an artificial neurosis closely

allied to hysteria (Charcot). Both hysteria and hypnosis are based upon *narrowing of the field of consciousness* (Janet), or upon *dissociation* of consciousness (Coriat et al).

c. The suggestion theory: hypnosis is an increased susceptibility to suggestion. This results in an *induced artificial sleep* (Bernheim), or in a form of *concentrated attention* (Münsterberg).

d. The inhibition theory: hypnosis is a selective form of inhibition limited to one function, viz. the *initiative.* (Claparède.)

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PART II.

The Mental Syndromes or Symptom-Complexes of Insanity.

CHAPTER XVI.

Definitions, Etiology, Classification.

A. Definitions

1. Mental Disease is strictly speaking always brain disease with mental symptoms.
2. A Psychosis is an active pathological process with pronounced mental symptoms (as above).
3. Dementia is a mental deficiency or infirmity which results from a psychosis.
4. Amentia is a mental deficiency which is congenital or very early acquired.
5. Insanity is a social or legal concept, and is applied to cases where the abnormality is great enough to warrant commitment.
6. Psychiatry is the science of mental diseases. It includes symptomatology, etiology, pathological anatomy, and therapy of mental diseases, and care of the insane.

B. Etiology.

I. Predisposing Causes.

1. Individual.
   a. Inherited predisposition.
   b. Acquired predisposition, brought about by alcohol, syphilis, tuberculosis, exhaustion, etc.
2. General.
   a. Age, especially the physiological epochs: puberty and the climacteric.
   b. Sex, special liability of sexes to certain psychoses.
   c. Civil condition, incidence of insanity among single and married.
   d. Civilization and environment, urban vs. rural life, etc.
   e. Race, special liability of certain races to certain psychoses.

II. Exciting Causes.

1. Physical.
   a. Alcohol and other poisons.
   b. Autointoxication.
   c. Syphilis.
   d. Sexual irregularities, excess and abstinence.

e. Pregnancy, confinement, lactation, etc.
f. Trauma, especially head injury.
g. Infection.
h. Exhaustion by overwork or sickness.
i. Bodily disease.
j. Privation and suffering due to war, famine, or other causes.
k. Imprisonment and other forms of isolation.

2. Mental.
   a. Fright and other excessive emotions, (including the so-called "Shell shock.")
   b. Worry, domestic or business.
   c. Unrequited love, and sorrow.
   d. Mental conflict.
   e. Social maladjustment.

III. The Psychical vs. the Physical Explanation of mental disease or the "Mind twist" vs. the "Brain spot" hypothesis. There are roughly speaking three groups of mental diseases from the standpoint of explanation:

1. A group always explained by reference to pathological brain processes, the *organic diseases*, e. g. paresis.
2. A group always explained by so-called mental causes: worry, conflict, shock, childhood experience, etc., the *psychoneuroses.*
3. A group sometimes explained neurologically, Sometimes psychologically, the so-called *functional psychoses*, e. g. dementia precox. (See Chap. I for author's standpoint on explanation.)

C. CLASSIFICATION AND DIAGNOSIS OF MENTAL DISEASES.

1. Kraepelin's emphasis on *course and outcome* as well as etiology as a basis for diagnosis and classification.
2. Wernicke's emphasis on the *nature and localization of the cerebral disease process* in establishing a disease entity—this localization to be determined by analysis of the *symptom-complex.*
3. Ziehen's classification, based on psychological rubrics.
4. Etiology, as far as it is known today, is not a satisfactory basis for classification; for the same etiological factor, e. g. alcohol, may percipitate different psychoses.
5. Symptomatology as a basis for classification is also unsatisfactory because of the variability of the symptom-complexes in the

same disease. Since, however, these symptom-complexes are of foremost interest for psychology, the following chapters deal chiefly with this aspect of mental disease.

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CHAPTER XVII.

Dementia Precox, Paraphrenia, Paranoia.

Dementia Precox is so named because it is supposed to be a form of mental deterioration developing during puberty and adolescence; but the deterioration is often more apparent than real, and it may occur much later in life.

I. Kraepelin's Clinical Forms.

1. Dementia Simplex.
2. Hebephrenia.
3. Simple Depressive with or without stupor.
4. Depressive with delusions.
5. Excited States: (a) circular, (b) agitated, (c) periodic.
6. Katatonia, excitement and stupor (Kahlbaum).
7. Paranoid forms: (a) Paranoides gravis, (b) paranoides mitis.
8. Schizophasia.

II. Symptoms Common to all Forms.

1. Sensory: anesthesia rare, headaches frequent, anorexia.
2. Hallucinations, especially of hearing, sight and touch.
3. Consciousness clear (except sometimes in excited or stuporous states).
4. Attention: *Aprosexia* and blocking of attention.
5. Orientation undisturbed (occasionally the delusional form of disorientation exists).
6. Memory usually good, but some *amnesia* in the later stages, especially *anterograde.*
7. Association incoherent, desultory, absence of "Goal Idea," *neologisms.*
8. Judgment: progressive defect, and delusions especially of *reference.*
9. Feeling and Emotion, gradual deterioration to *apathy,* loss of interest, variability and instability in the early stages, *in trapsychic* or *noo-thymopsychic ataxia.*
10. Innate Action, etc.
    a. Reflexes usually exaggerated, sometimes diminished.

b. Pupils: mydriasis, inequality, sluggish reaction.
c. Convulsive attacks, usually epileptiform.
d. Vasomotor disorders: *cyanosis* and *dermographism.*

11. Conduct.
a. Impulsive and purposeless acts.
b. Hypersuggestibility: echopraxia, echolalia, automatism.
c. Stereotypy and mannerisms.
d. Negativism or blocking of the will, *mutism*, interference.

12. Insomnia and pathological dreams.

13. Schizophrenia, or "Fragmentation of the Psyche" (Bleuler).

14. Progressive mental deterioration.

The clinical forms are determined by the special development of certain groups of these symptoms. The most important types follow.

III. Symptoms of Dementia Simplex. (Adolescent.)

1. Emotional deterioration and variability, apathy, lack of interest, loss of "Pride and Ambition."
2. Conduct, lazy and neglectful.
3. Sometimes mild delusions, but no ideas of grandeur.
4. Hallucinations are rare.

Few of these cases get into the institutions, but they go to swell the ranks of the *tramps, prostitutes, and criminals.* They can be distinguished from the feeble-minded only by their history.

IV. Symptoms of Hebephrenia (75% before age 25).

1. Onset usually *insidious* with change of disposition, depression or irritability shown early.
2. Hallucinations numerous: auditory, visual, cutaneous.
3. Delusions: fantastic, silly, incoherent, at first depressive but later expansive, often religious and sexual, "Ideas of reference," lack of insight except perhaps in the early stages.
4. Association: poverty of ideas, incoherence, irrelevance, *neologisms*, and stilted phrases.
5. Emotion and feeling: indifferent and apathetic, or flighty and dissociated, i. e. do not fit the ideas (*Intra-psychic ataxia*).
6. Conduct: "Peculiar," purposeless, untidy, manneristic, by turns headstrong and tractable. The silly, inappropriate laugh is characteristic.

V. Symptoms of Catatonia. This term is limited by Kraepelin to cases of characteristic *excitement and stupor* (60% before age 25).

1. Onset: usually initiated by depression, followed by stupor and then excitement, but the order may vary.
2. Catatonic stupor (or *pseudostupor*) is characterized by two opposite groups of symptoms that *alternate* or involve separate muscle groups simultaneously.
   a. Negativism, muscular tension and "Spring resistance," *mutism*, and heterokinesia or active opposition.
   b. Hypersuggestibility: *cerea flexibilitas* or catalepsy, command automatism, echopraxia, and echolalia.
3. Catatonic Excitement: increase psychomotor activity, impulsive and compulsive acts, mannerisms, *stereotypy*, verbigeration, and extreme incoherence.

VI. Symptoms of Paranoid Dementia Precox (40% before age 25). This form is characterized by a *special development of delusions*. There are two varieties.

1. Paranoides gravis.
   a. The delusions are *incoherent*, changeable, fantastic, at first depressive and persecutory, but latter also expansive and grandiose.
   b. The hallucinations are also fantastic and effect all the senses, but especially hearing.
   c. Speech contains peculiar phrases and *neologisms*.
   d. Motor excitement frequent, anxiety, restlessness, etc.
   e. Rapid deterioration and *terminal dementia*.
2. Paranoides mitis.
   a. Delusions are more *coherent and systematic*, but they are still fantastic and may be persecutory, melancholic, or megalomanical.
   b. Hallucinations as above, but especially motor hallucinations and "Double thought" (stealing and echo of thought).
   c. Moderate dementia after a long period of time.

VII. Paraphrenia. Closely allied to the dementia precox group is the Kraepelinian *paraphrenia*. This seems to correspond to Magnan's "Delire Chronique à évolution systematique;" and differs from dementia precox in the following respects:

1. It usually develops later in life, after thirty years or more.

2. Dementia does not supervene until as much as twenty years after the onset.
3. The delusions are *perfectly systematized*, and it has a regular evolution, as follows:
   a. Hypochondriacal stage: emotional depression and irritability, delusions of reference and disease.
   b. Stage of persecution: well systematized yet fantastic persecutory delusions, and hallucinations of hearing which fit these delusions. *Il fuit; se defend; attaque.*
   c. Transformation of the personality: ideas of grandeur develop, perhaps as a result of delusions of persecution, *retrospective falsifications of memory.*
   d. Dementia: the delusions gradually subside leaving a moderate deterioration.

VIII. Paranoia. The distinction between paranoid dementia precox, paraphrenia, and paranoia is not at all clear; and they may all be merely different forms of the same disease. The term paranoia may, however, be applied to a chronic progressive psychosis which occurs mostly *in adult life*, and develops on the basis of certain character anomalies, viz. "Conceit and suspicion." It may be described as follows:

1. An insidiously formed psychosis developing in early adult life.
2. Delusions are well systematized, usually take the form of *false interpretation of facts*, and might very well be true. They are persecutory and expansive, and lead to much "Retrospective falsification."
3. Hallucinations are absent or very rare.
4. Conduct and emotions are apparently normal, or fit the delusions.
5. There is no intellectual deterioration, disorder of will or thought.
6. The delusional system appears so logical that others may be persuaded of its truth; and sometimes the one living with the paranoiac may accept the same delusions and act upon them (Folie à deux). These delusions are characteristic and their general trend results in the following so-called forms of paranoia:
   a. Delirium of interpretation (Serieux et Capgras).
   b. Delirium of revindication (Litigious paranoia).
   c. Persecutory, may result in the so-called *persecuted persecutors.*
   d. Inventive: patients besiege patent offices with their many devices.

e. Religious, accounts for many would be religious leaders.
f. Erotic or amorous.
g. Hypochondriacal.
h. Reformatory, accounts for many street corner orators.

IX. Etiology of Dementia Precox.

1. Predisposing causes:
   a. Heredity. Eighty to ninty per cent show some hereditary taint: insanity, nervous disease, or alcoholism in the parents.
   b. Age. It is a disease of adolescence, but may develop much later (cf. poliomyelitis in adults).
   c. The pre-dementia precox constitution, the "Shut-in," seclusive, retiring personality that develops dementia precox (Hoch).
2. Exciting causes:
   1. Physical: head injury, pregnancy and childbirth, fever, alcoholism and imprisonment.
   2. Mental: worry, conflict, emotional shock, etc.

X. Nature of the Disease.

1. Functional interpretations (mind twist hypotheses):
   a. It is the acquisition and development of vicious and inadequate habits of thought and action—a habit disorder or *disharmony of habits.* (Meyer).
   b. It is the manifestation of *repressed complexes*, especially sexual. These complexes produce the mental symptoms, and may also cause an auto-intoxication which prevents recovery (Jung).
2. Organic interpretations (brain spot hypotheses).
   a. It is an auto-intoxication by some internal secretion, probably of the sex glands. (Kraepelin).
   b. Cortical changes have been found: cell loss, gliosis, and satellitosis. In the paranoid forms these changes are chiefly in the frontal lobes; in the catatonic forms, in the post-Rolandic and parietal areas, or in the cerebellum. (Southard.)

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CHAPTER XVIII.

Manic—Depressive Insanity.

The term Manic-Depressive Insanity is applied by Kraepelin to a disease characterized by *recurrency of groups of mental symptoms and recovery from each attack without mental deterioration.* It includes the manias, melancholias, circular and periodic insanities of the older psychiatrists (e. g. Griesinger and Kraft-Ebing); because (a) these have certain fundamental symptoms in common, and (b) manic and depressive attacks generally occur in the same individual. The duration of each attack is from a few days to several months or even years, and the interval between attacks may likewise be days or years.

I. Symptoms of Manic-Depressive Insanity. The fundamental symptom in all forms is *psychic inhibition*, and in the manic phase there is likewise *exaggerated automatism.*

1. Imperception or insufficiency of perception in all except the mildest forms.
2. Hallucinations in the severer forms, also illusions especially of recognition.
3. Consciousness is clear, except in the delirious forms.
4. Orientation is also good, except in delirious and delusional forms.
5. Memory is not much affected, but usually *anterograde amnesia* for the attack.
6. Judgment is impaired, and there are sometimes delusions which fit the feelings: expansive in mania, hypochondrical and self-accusatory in depression.
7. Instincts are out or proportion: self-assertion, curiosity, pugnacity, and the sexual instinct are exaggerated in mania; self-subjection and fear in depression.
8. Sleep is disturbed by insomnia or anxious dreams.

The following functions are markedly disturbed in apparently opposite but fundamentally similar ways in depression and mania:

Both Phases	*Manic Phases*	*Depressive Phases*
9. Attention weakened (aprosexia)	Distractibility	Inattention and conflict of attention.
10. Affectivity: inhibition of altruistic feelings.	Pleasantness, elation, euphoria.	Unpleasantness, anxiety, gloom.
11. Associations retarded.	Flight of ideas (no "Goal Idea")	"Thinking difficulty," and fixed ideas.
12. Action: inhibition of voluntary action.	Psychomotor excitement or "Pressure of Activity" with absence of fatigue.	Psychomotor retardation, and exaggerated feeling of effort and fatigue.

II. Clinical Forms (Kraepelin).

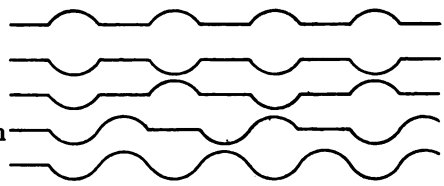
1. Manic states, characterized by elation, flight of ideas, psychomotor excitement.
   a. Hypomania, the mildest form.
   b. Mania (tobsucht).
   c. Delusional form, ideas of grandeur.
   d. Delirious form, clouding of consciousness, disorientation, hallucination.
2. Depressive states, characterized by depression, thinking difficulty, psychomotor retardation.
   a. Melancholia simplex, or simple retardation, the mildest form.
   b. Depressive stupor, complete inhibition of action, may resemble catalepsy.
   c. Melancholia gravis, extreme form with delusions and hallucinations.
   d. Paranoid melancholia, delusions of reference and persecution.
   e. Fantastic melancholia, extremely absurd delusions and hallucinations.
   f. Delirious melancholia, deep dreamy clouding of consciousness with hallucinations and delusions.
3. Composite forms, simultaneous (*mixed states*). If we represent the manic disorders of affectivity, association, and action (including attention) by the plus sign (increased automatism), and the depressive by minus (psychic inhibition), we get the following combinations:

	Affectivity	*Association*	*Action*
a. Depressive mania	−	−	+
b. Akinetic (gehemmte) mania	+	+	−
c. Agitated depression	−	+	+
d. Maniacal stupor	+	−	−
e. Unproductive (gedankenarme) mania	+	−	+
f. Depression with flight of ideas	−	+	−

g. Grumbling mania is a form in which the *euphoria* of mania is replaced by irritability and pugnacity.

4. Periodic and circular forms (successive composition). The tendency to *recurrency and alternation* is according to Kraepelin fundamental; so that insanity of double form is the prototype of the disease. If mania is represented by a convex line, depression by a concave line and normality by a straight line, then the following diagrams will represent the various combinations.

a. Recurrent mania
b. Recurrent melancholia
c. Alternating Insanity
d. Insanity of Double form
e. Circular Insanity



f. Irregular forms, no definite sequence of states.

5. Chronic mania is a relatively rare form occuring usually late in life. The symptoms are the same as in mania above, but they are not intermittent. It usually follows several attacks of manic-depressive insanity.

6. Involutional melancholia is probably not an independent disease, but belongs to the group manic-depressive insanity (Dreyfus). It is mixed state c. above, agitated depression or *melancholia agitans*. This involutional form can, however, be distinguished from other forms by:

a. The age of the patient (40-50 in women, after 50 in men), and evidences of involution.

b. The prominence of delusions, especially of sin (past), ruin, negation and disease.

c. The extreme anxiety or apprehensiveness, i. e. the emotional depression is dominated by fear.

III. Etiology of Manic-Depressive Insanity.

1. Predisposing causes.

a. Hereditary taint in 80% of the cases, especially manic-depressive insanity, alcoholism, or psychopathic personality in the family history.

b. Age: may develop at any age from 10 to 70 or more, but the majority of cases develop between 15 and 25.

c. Sex: two-thirds of the cases are female.

d. The *pre-manic-depressive* constitutions:

(*a*) The depressive diathesis, constitutional moodiness.

(*b*) The manic diathesis, constitutional flightiness, excitability, or euphoria.

(*c*) The irritable diathesis, tending to develop mixed forms.

(*d*) The cyclothymic diathesis, by turns elated and gloomy.

2. Exciting causes.
   a. Stress of puberty, menopause or climacteric, childbirth, overwork, etc.
   b. Mental shock, worry, and conflict.

IV. Nature of the Disease.

1. A vasomotor disorder resulting in anemia or hyperemia of the brain. (Meynert, Féré.)
2. A disorder of nutrition or assimilation, and the consequent poisoning of the body by uric or intestinal toxins (Auto-intoxication).
3. A disorder of some gland or glands of internal secretion and a resulting auto-intoxication.
4. Southard has found "Interstitial nerve cell pigmentation" (catabolic clogging) in all parts of the cortex in *depression;* and Bevan Lewis also reports changes in pigmentation of cells in mania, and depression.
5. Southard has also found a high correlation between chronic diffuse thalamac lesions and *hyperkinetic* symptoms; and suggests that the sensory stimuli are not damped in the *pathologically simplified thalmamus* and the hyperkinesis is thus due to unusually intense stimuli reaching the cortex.

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CHAPTER XIX.

Dementia Paralytica.

Dementia Paralytica, otherwise known as *Paresis* or *General paralysis of the insane*, is a chronic psychosis of middle age characterized by progressive mental deterioration leading to absolute dementia, and by physical symptoms leading to paralysis and death usually within three years.

I. Symptoms: rapid progressive intellectual enfeeblement is fundamental.

1. Disorders of sensation.
   *a. The onset may be marked by *neurasthenic symptoms*: headache, dizziness and increased sense of fatigue.
   *b. Hyperesthesia of all senses at first, followed by hypoesthesia and anesthesia especially of the cutaneous sense. The sexual hyperesthesia frequently leads to criminal acts at the beginning.
   c. Amblyopia, hemianopsia, etc. are sometimes encountered.
2. Disorders of perception.
   a. Mental blindness, deafness, and astereognosis are often observed, especially after a "stroke."
   *b. General imperception, or impaired "Intake" and assimilation of impressions (Apprehension).
   c. Hallucinations and illusions are rare, but may affect any sense including kinesthesis and touch (*paresthesia*).

*3. Clouding of Consciousness, dreamlike as if intoxicated. Very profound in the terminal stage.

*4. Complete disorientation, especially as to time.

*5. Attention is impaired, difficult to *arouse* and to *maintain* (aprosexia).

6. Disorders of memory.
   *a. Amnesia, both anterograde and retrograde. Recent events go first, but remote are rapidly involved, and memory gaps are frequent.
   b. Paramnesia: as the store of ideas decreases, there is increased

*Indicates essential symptoms, common to all forms.

play of imagination, and the memory gaps are filled with senseless fabrications which can be influenced by suggestion.

7. Disorders of judgment.
   *a. Impairment of judgment is one of the first symptoms, and often leads to disastrous business ventures, social blunders, etc.
   *b. Total lack of insight except at the very beginning.
   c. Delusions vary greatly in different cases; but they are always mobile, unstable, incoherent and contradictory. They may be grandiose, melancholy or persecutory.

*8. Affectivity: morbid *indifference* and *irritability*. The higher moral feelings disappear, and there is extreme instability of emotional tone. The *mood varies* with the type: euphoric, depressed, or apathetic.

9. Conduct shows lack of foresight, and is foolhardy, unconstrained with no regard for custom or law.

10. Catatonic symptoms are occasionally found in the advanced stages: catalepsy, stereotypy, verbigeration, echolalia, echopraxia, etc.

*11. Progressive muscular weakness and atrophy.

*12. Tremors.
   a. Fibrillary, especially in tongue and peribuccal muscles.
   b. Coarse or *en masse*, as "Trombone movements" of tongue.

13. Motor incordination, involving *most delicate movements first.*
   *a. Paretic speech (see p. 54), also aphasia after attacks.
   *b. Paretic writing (see p. 55).
   *c. Paretic gait (see p. 52).
   d. Romberg sign shown in 20% to 30% of cases.

*14. Pupillary disorders.
   a. Changes in shape: oval or irregular.
   b. Changes in size: myosis, mydriasis, inequality.
   c. Changes in reflexes: loss of consensual and sympathetic reflexes, followed by *Argyll-Robertson pupils.*

*15. Disorders of other reflexes: the tendon reflexes may be normal, exaggerated, diminished, abolished, or unequal. Sometimes Babinski sign and ankle clonus are found.

*16. Paralysis or paresis, especially of facial muscles with consequent *lack of expression.*

17. Epileptiform and apoplectiform seizures after the first stage.

II. Forms of Dementia Paralytica.

1. The demented form is the typical G. P. (40%).
   a. Gradual onset.
   b. Progressive mental deterioration without much prominence of *accessory symptoms.*
   c. Course about 2 years.
2. Expansive form (about 15%), the *classical picture.*
   a. Gradual onset.
   b. Megalomania, i. e. euphoria and delusions of grandeur.
   c. Psychomotor excitement, activity and flight of ideas.
   d. Prolonged course (over three years), and frequent remissions.
3. Agitated form (about 10%).
   a. Rapid onset.
   b. Extremely expansive delusions.
   c. Great psychomotor excitement (resembling mania).
   d. Great clouding of consciousness, with complete disorientation and hallucinations (resembling delirium tremens).
   e. Rapid course—less than two years, in "Galloping Paresis" only few months.
4. Depressed form (25%).
   a. Onset insidious with depression and irritability.
   b. Delusions: hypochondriacal, self-accusatory, persecutory, with auditory hallucinations.
   c. Emotional depression, fear, and anxiety.
   d. Psychomotor retardation, simulating melancholia.
   e. Course: 70% die within 2 years.
5. Spinal forms, tabetic and spastic. In these forms the physical symptoms are exaggerated.

III. The Course of the Disease may be divided arbitrarily into four stages.

1. Prodromal period, simulating neurasthenia.
2. Stage of onset, the medico-legal period.
3. Stage of acute symptoms, or complete development of symptoms.
4. Stage of terminal dementia, accessory symptoms disappear and the patient lives a mere vegetative existence.

IV. Etiology of G. P.

1. Predisposing causes.
   a. Hereditary taint occurs in about 50% of the cases, usually organic or functional nervous disease.

b. Age: usually between 30 and 50 (average age about 42, Diefendorf); but juvenile and infantile paresis also occur.
c. Sex: less frequent in women than in men.
d. Race: paresis almost unknown in Egypt, and incidence high among negroes in America.
e. Social factors: more frequent in civilized countries, in large cities, in certain occupations, in prostitutes, and in the unmarried.

2. Exciting causes.
a. Stress: emotional stress, overwork, venereal and other excesses.
b. Cranial traumatism: according to Diefendorf in 23% of cases, but denied by some authors.
c. Excessive alcoholism.
d. Syphilis is probably the essential cause, *sine qua non*. There is a period of 3 or more years (average 10) between the syphilitic infection and development of G. P. The arguments for and against syphilitic origin are as follows:
Pro. (*a*) Paresis is unknown or rare where syphilis is unknown or rare.
(*b*) History of syphilis oftener in paresis than in other psychoses and in juvenile cases syphilis is always found in the parents.
(*c*) Inoculation of paretics with syphilitic virus fails to produce syphilis (Kraft-Ebing).
(*d*) Positive Wassermann reactions are given in paresis just as often as in active syphilis.
Con. (*a*) No history of syphilis in some cases; *but* 20% of syphilitics present no history of infection.
(*b*) Only four to five per cent of syphilitics develop paresis; *but* this only means that there is also some other causal factor, a predisposing cause.
(*c*) Paresis is rare in certain countries where syphilis is common, e. g. Egypt, China, etc. Hence Kraft-Ebing's dictum that it is "A disease of civilization and syphilization."
(*d*) Anti-syphilitic treatment does not ameliorate the symptoms. (?)
(*e*) The anatomico-pathological argument: the lesions of paresis are not the same as those of syphilis.

V. The Nature of the Disease Process.

1. The theory that it is active syphilis of the brain has usually been refuted by pointing out that no treponemata pallida are found

in the brain lesions. Noguchi and Moore have, however, presented some positive evidence.

2. It is due to a special G. P. producing variety of syphilis.
3. It is a metasyphilitic or parasyphilitic disease, probably due to auto-intoxication. Syphilis interferes with metabolism, and there results a toxin which causes the lesions. (Kraepelin.)
4. It may be due to the over-development of the syphilitic antibodies for the milder cases of syphilis are more likely to develop paresis. (?)
5. There are numerous structural alterations in the brain due to a chronic, progressive, diffuse meningo-encephalitis. The lesions are found chiefly in the frontal lobes in cases with autopsychic delusions. (Southard.)

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CHAPTER XX.

The Alcoholic Psychoses

I. The Effects of Small Doses of Alcohol have been studied experimentally; but the results are conflicting, e. g. different workers have found that the motor processes are *facilitated, unaffected,* and *depressed* by small amounts. (See the work of Kraepelin, Rivers and Webber, Benedict and Dodge.)

II. Acute Alcoholic Intoxication.

1. Ordinary drunkenness.
   a. First stage, excitement, due to inhibition of higher functions, resembles hypomania with some insufficiency of perception.
   b. Second stage, paralysis. The inhibition extends to the lower automatic functions; hence the indistinct speech, unsteady gait, clumsy incoordinate movements, and final coma.
2. Pathological drunkenness.
   a. Comatose drunkenness: phenomena of excitement absent, and coma from the beginning. Amnesia after recovery, often retroactive.
   b. Manical drunkenness: excitement dominates the picture, and there are disorders of perception, also amnesia for attack.
   c. Convulsive drunkenness: simulates an epileptic seizure.
   d. Delusional drunkenness: characterized by the development of persecutory, depressive, or expansive delusions.
3. Dipsomania is a periodic impulse to drink, which occurs in certain psychopaths or degenerates.
4. Dream states, somnambulism or other forms of automatism sometimes result from acute intoxication in individuals predisposed to mental dissociation.

III. Chronic Alcoholism is the result of the habitual intemperate use of alcohol. Its main characteristic is a *gradually progressive dementia;* but there are also characteristic accessory symptoms.

1. Disorders of sensation.
   a. Cutaneous areas of anesthesia or hypoesthesia, hyperesthesia, and paresthesia.

b. Visual: photomata and amblyopia.

c. Auditory: akoasms or subjective noises.

d. Vertigo, headaches, and muscular pains.

2. Perception: some general insufficiency with occasional hallucinations.

3. Attention is distractible.

4. Memory: progressive amnesia both retrograde and anterograde.

5. Judgment is weakened, and there are frequently delusions of *persecution* and *jealousy*.

6. Affectivity.

a. Indifference and irritability.

b. Deterioration of the moral sentiment is most characteristic. This is shown by mendacity, loss of honor, disregard for family and friends, *distorted sense of humor*, and in hgeneral by "loss of character."

7. Instinct and emotion.

a. Quarrelsomeness with occasional violent outbursts of anger.

b. Increased sexual desire accompanied by impotency.

c. The Ego instincts are primitive. There is abject submission to superior force, and aggressiveness and brutality to the weak.

8. Diminished capacity for work, because of susceptibility to fatigue and lack of application.

9. Action: tremor, muscular weakness, disordered reflexes and pupils, uncertain gait, thick, slurring or aphasic speech.

10. Sleep is diminished and there are terrifying dreams, similar to delirium tremens.

11. Anorexia, pyrosis, "Dry retching" in the morning, and other gastro-intestinal disorders.

12. Epileptoid attacks occur in many cases.

On the basis of chronic alcoholism there may develop certain *intercurrent psychoses:* delirum tremens, alcoholic hallucinosis, alcoholic paranoia, Korssakow's psychosis, and alcoholic paresis and pseudo-paresis.

IV. Delirium Tremens and Alcoholic Hallucinosis will be considered together to show better their similarities and differences. The following table presents the chief symptoms of each disease in parallel columns:

	Delirium Tremens	*Alcoholic Hallucinosis*
1. Perception	a. Hallucinations, especially visual, changeable, animated, e. g. snakes, monkeys, insects, etc. b. General imperception, or impaired "Intake."	Hallucinations, especially auditory, overhears voices threatening, accusing, or defending. Normal.
2. Attention	Distractible.	Normal.
3. Consciousness.	Clouded, dreamlike.	Normal, except occasionally at night.
4. Orientation.	Allopsychic disorientation (time and place).	Normal.
5. Memory.	Anterograde amnesia.	Normal.
6. Association.	Flight of ideas, distractibility.	Normal.
7. Judgment.	Fugitive delusions.	Pronounced delusions, especially of persecution, assassination, jealousy, etc., in conformity with hallucinations.
8. Affectivity.	First, fear and anxiety; later anxiety with occasional humor or cheerfulness.	Anxiety and cheerfulness.
9. Action.	Suggestible, restless, talkative, occupation or persecutory delirium, exaggerated reflexes, marked coarse tremor, etc.	Result of delusions: reserved and silent or aggressive and dangerous.
10. Course.	Rapid: 4 to 5 days, ending in death, or recovery after sleep.	Several weeks, gradual recovery.

V. Alcoholic Paranoia may be interpreted as the reaction of the chronic alcoholic to the circumstances in which he finds himself, viz., his wife's aversion and his own sexual impotence.

1. Disturbance of judgment is the central symptom.
   a. Delusions of marital infidelity or jealousy (Eifersuchtswahn).
   b. Delusions of persecution, poisoning, etc.
   c. Misinterpretation of common-place occurrences in the light of the delusions.
2. Occasional hallucinations and illusions which harmonize with the delusions.
3. Conduct is usually not in accord with the delusions. There is weak *submission to the supposed injustice;* but under the influence of alcohol, the patient becomes threatening, aggressive and dangerous.

VI. Korsakoff's Disease or the polyneuritic psychosis occurs most frequently on the basis of chronic alcoholism, although it may have another etiology. It frequently follows an attack of delirium tremens.

1. Insufficiency of perception, or impaired "Intake" of impressions.
2. Illusions and hallucinations are rare.
3. Complete disorientation as to time, place, and persons (allopsychic).
4. The memory disorders are the most marked symptoms.
   a. Amnesia especially anterograde, but also retrograde.
   b. Paramnesia: the gaps in memory are filled by *extensive fabrications.* These are more reasonable than the fabrications of the paretic, and can be influenced by suggestion.

5. Affectivity: at first anxious, later indifferent and apathetic with sometimes temporary euphoria.
6. Conduct is quiet and orderly, but suggestible and negligent.
7. Polyneuritic symptoms: sensitiveness of circumscribed muscular areas, paresis of the lower extremities, abolition of tendon reflexes, pupil disorders, etc.
8. Course: there is gradual improvement after several months, but some terminal dementia.

VII. Alcoholic Pseudoparesis is a form of chronic alcoholism in which the physical symptoms (polyneuritic and paretic) predominate. There may also be expansive delusions and hallucinations.

VIII. Etiology of the Alcoholic Psychoses.

1. Alcohol is the chief exciting cause.
2. Hereditary predisposition is, however, equally important. "To become alcoholic one must be alcoholizable."
3. The form of the psychosis that develops on the basis of chronic alcoholism is probably determined by individual predisposition.

IX. The Nature of the Disease Process.

1. The alcohol may have a direct chemical action on the nervous system and its linings, or it may affect the brain indirectly through changes in the circulatory system.
2. The following theories of delirium tremens have been advanced:
   a. It is a belated alcoholic intoxication caused by accumulation of the poison in the system.
   b. It is due to withdrawal of alcohol: an abstinence phenomenon.
   c. It is an autointoxication, probably due to insufficiency of liver and kidneys resulting from the use of alcohol.

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CHAPTER XXI.

Morphine, Cocaine and Other Drugs.

A. Morphine

There are four periods in the career of a morphinomaniac:

I. Period of Initiation (acute intoxication): the "Honeymoon of the morphinomaniac."

1. Increased activity of thought, but more coherent than "Flight of Ideas."
2. Pleasurable feelings, a mild *euphoria.*
3. Psychomotor retardation.
4. Visual hallucinations, changing and fantastic.

II. Period of Hesitation, and attempt to discontinue the habit.

III. Morphinomania Proper.

1. Permanent symptoms.
   a. Hyperesthesia and paresthesia: ringing in the ears, vertigo, dimness of vision, loss of appetite.
   b. Impairment of attention (aprosexia).
   c. Amnesia, anterograde and retrograde.
   d. Affectivity: variable and indifferent, especially *moral degradation.*
   e. Action: aboulia, tremor, and muscular weakness.
   f. Sleep: insomnia by night, drowsy by day.
2. Abstinence symptoms.
   a. At first anxiety and paresthesias, followed by delirium tremens symptoms, viz.:
   b. Clouding of consciousness.
   c. Hallucinations.
   d. Restless excitement.
   e. Persecutory delusions, and delusions of *infidelity.*

IV. Cachexia: previous symptoms exaggerated, considerable dementia, and final death.

B. COCAINE.

I. Acute Cocaine Intoxication.

1. Feeling of well-being, or *euphoria.*
2. Flight of ideas, and talkativeness.
3. Motor excitement, followed by paralysis.

II. Chronic Cocaine Intoxication.

1. Habitual state.
   a. Hyperesthesia, and occasional hallucinations.
   b. Flight of ideas.
   c. Psychomotor excitement; but activity is planless, and there is indecision and lack of application.
   d. Feeling tone is indifferent, with occasional irritability and gaiety.
   e. Amnesia, anterograde and retrograde.
2. Cocaine delirium, or *acute cocaine hallucinosis.*
   a. Illusions and hallucinations affecting all the senses. The visual are moving and often microscopic, the tactual are like insects moving under the skin: the "Cocaine bug."
   b. Consciousness is clear, and orientation usually good.
   c. Delusions of persecution and *jealousy.*
   d. Feeling tone, depressed and irritable.
   e. Actions: restless, often react to delusions, and therefore *dangerous.*
   f. Increased sexual excitement with impotency (cf. alcoholism).
3. The abstinence symptoms are not so marked as in morphinism, and are usually of a physical nature; but the delusions persist for some time.

C. OTHER DRUGS.

I. The Effects of Caffein have been studied experimentally by Hollingworth. He found that doses up to 3 grs. *increased speed and accuracy* of both motor and mental performances. From 4 to 6 grs. had a similar effect, but produced some unsteadiness. There were no bad after effects.

II. The Effects of Strychnine in small doses have been studied experimentally by Poffenberger. He found that small doses (from 1-20 to 1-30 gr.) produced no special effect on the motor and mental processes studied.

III. The Effects of Other Drugs, see Crothers' "Morphinism and Narcomania from Other Drugs."

D. ETIOLOGY OF THE DRUG PSYCHOSES

1. Besides the particular drug in question, there is usually a *defective constitutional basis.* Morphinomaniacs are often degenerates.
2. The abstinence symptoms are probably due to intoxication by an antidote formed by the organism to counteract the effect of the drug (see Stoddart).

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CHAPTER XXII.

The Presenile and Senile Psychoses.

A. Presenile Delusional Insanity.

Presenile delusional insanity may be regarded as a late dementia precox (Bleuler). It is rare, and occurs between 50 and 65 years of age.

1. Delusions are the central symptoms. These are unstable and fantastic; the patient may show momentary insight, and then revert to a new delusion.
   a. Hypochondriacal delusions are the first to develop.
   b. Delusions of suspicion: poison, robbery, etc.
   c. Delusions of *infidelity* are very pronounced and absurd.
2. Hallucinations are rare: auditory, in conformity with delusions.
3. Consciousness and orientation unimpaired.
4. Memory: remote unimpaired, recent poor.
5. Affectivity: at first depression and fear; later excitement, irritability, and sometimes violence and abusiveness.
6. Conduct, senseless, in accord with delusions: consult physicians, refuse to eat, guard carefully the object of jealousy; and yet are friendly to the supposed persecutor, and associate with the faithless consort.
7. Terminates in moderate dementia.

B. Senile Dementia.

Senile dementia is a progressive deterioration and retrograde metamorphosis occurring in old age—rarely before the sixtieth year, and terminating in dementia and death. There are several clinical varieties of the disease: simple senile deterioration, presbyophrenia, senile delirium, and senile delusional insanity.

I. Simple Senile Deterioration may be regarded as an *exaggeration of normal senility.* The chief symptoms are as follows:

1. General imperception, or impaired "Intake" of external impressions.
2. Hallucinations, and especially *illusions* are common.

3. Clouding of consciousness and disorientation in the severer forms.
4. Association: *circumstantiality* and dearth of ideas.
5. Memory.
   a. Amnesia, anterograde and retrograde following Ribot's "Law of Regression."
   b. Paramnesia: fabrications and pseudo-reminiscences fill the gaps in memory.
6. Judgment is impaired.
   a. Misoneism, or intolerance for new points of view, or customs.
   b. Delusions in severer forms: of reference, of robbery, somatic, and *nihilistic.*
   c. Lack of insight into mental condition.
7. Affectivity.
   a. Indifference, variability, and irritability.
   b. Egotism, avarice, and lack of sympathy.
   c. Exaggerated sexual excitement, usually with impotency—may lead to indecent and criminal acts.
8. Conduct: some are quiet and docile, others quarrelsome and turbulent. Nocturnal restlessness and *closet-rummaging*, and somnolence by day are characteristic.
9. Tremor, muscular weakness, and usually exaggerated reflexes.

II. Presbyophrenia resembles Korssakow's psychosis. It is characterized by:

1. Complete disorientation.
2. Extreme amnesia, especially anterograde, and extensive *fabrications.*
3. The patient is alert and talkative, and association is more coherent, and judgment and feeling less impaired than in simple deterioration.

III. Senile Delirium usually occurs as an episode in senile dementia. It simulates delirium tremens.

1. Variable hallucinations, especially of sight and hearing.
2. Complete disorientation, and profound clouding of consciousness.
3. Incoherence of association, and pressure of speech.
4. Anxiety, restlessness, incessant activity, and *destructiveness.*

IV. Senile Delusional Insanity is a form of senile dementia in which delusions dominate the picture. These are absurd, changeable, and *unsystematized*; and may be:

1. Delusions of suspicion, persecution, and *jealousy.*
2. Delusions of self-accusation, *ruin,* and negation.
3. Delusions of grandeur.

C. ARTERIOSCLEROTIC INSANITY.

Arteriosclerotic insanity belongs to the senile or presenile group. It occurs usually after the fifty-fifth year, and is often associated with senile dementia. The first symptoms are as follows:

1. Drowsiness by day, insomnia by night as in neurasthenia.
2. Headaches and attacks of giddiness.
3. Great *fatigability,* and consequent diminished capacity for work.
4. Forgetfulness, which is progessive.

Later follow:

5. Frequent imperception: mental blindness, mental deafness, astereognosis, etc.
6. Clouding of consciousness, and disorientation in the severer forms.
7. Affective indifference, depression, irritability, or instability—laughing or weeping very easily.
8. Judgment.
   a. Insight generally persists for some time.
   b. Delusions of *reference and infidelity* are common.
9. Conduct: aboulia, restless without energy.
10. Apraxia is common: *sensory or motor aphasia* and paraphasia, agraphia, etc.
11. Apoplectiform or epileptiform seizures, each attack leaving various focal symptoms and additional dementia.

D. ETIOLOGY AND NATURE OF THE PRESENILE AND SENILE GROUP

I. Etiology. Besides age, the most important causes are: hereditary predisposition, overwork, and *excesses.* Syphilis, alcohol, and other poisons are especially important etiological factors in arteriosclerosis.

II. Nature of the Disease.

1. In senile dementia there are abiotrophic changes in the brain: nerve cell and fibre atrophy, proliferation of neuroglia, etc.
2. In the arteriosclerotic and other arteriopathic forms of insanity, there is degeneration of cerebral arteries and the effect upon the brain is indirect. There is cortical malnutrition or *softening*

due to thickening or obstruction of arteries; and the occasional rupture of an artery or arteriole results in "Shocks" and additional focal symptoms.

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CHAPTER XXIII.

The Symptomatic Psychoses.

This group consists of mental disorders that are associated with and symptomatic of various bodily diseases.

A. The Infection—Exhaustion Psychoses.

I. The Symptoms of (a) pre-febrile or initial delirium, (b) febrile delirium, and (c) collapse delirium due to exhaustion by fatigue or prolonged illness, are quite similar; and may be summed up briefly here.

1. Illusions and dreamy hallucinations.
2. Clouding of consciousness and disorientation.
3. Flight of ideas, or incoherence of association.
4. Vague, changeable delusions, usually persecutory.
5. Feeling tone is anxious, depressed, irritable; but sometimes euphoric and erotic.
6. Psychomotor restlessness, excitement, and impulsive movements.

II. Etiological Factors.

1. The individual's power of resistance is of importance. Fever delirium is like alcoholic intoxication a *measure of the mental stability of the individual.*
2. Elevation of temperature, congestion of nerve centers, excess of katabolism over anabolism, and poisoning by microbic toxins, by toxins resulting from disturbed nutrition, or by fatigue toxins. The marked resemblance of these deliria to the *toxic deliria* add weight to the view that some form of *toxemia* is the most important factor.

B. The Thyroigenous Psychoses

I. Myxedematous Insanity is due to deficiency of thyroid secretion. It is characterized by progressive inhibition of mental activity.

1. Extremely slow association of ideas.
2. Voice is rough, monotonous, and slow.
3. Aboulia, and impaired attention.

4. Amnesia, anterograde and retrograde.
5. Emotional indifference, or dejection and anxiety.
6. Action is awkward and slow, and reflexes are diminished.
7. The skin becomes thick, lines disappear, and the face loses expression.

II. Cretinism is a form of imbecility due to deficiency of thyroid secretion in children. Both bodily and mental development are arrested. The stature is short, thick, and pudgy, the skin is thick and padded, hair is scanty, etc. Mentally, there is dullness, stupidity, and indifference.

III. Exophthalmic Goitre, and Basedow's Syndrome. Mental symptoms are due to hypersecretion of the thyroid gland.

1. Apprehension, anxiety, fear.
2. Motor restlessness, and nervous excitement.
3. Visual and auditory hallucinations are not uncommon.
4. Insomnia and horrifying dreams.

C. MENTAL SYMPTOMS OF RENAL DISEASE.

I. Uremic Delirium is similar to the toxic deliria, especially to delirium tremens; but there are two principal forms: an expansive form with euphoria, and a depressed form with persecutory delusions.

II. Diabetes presents the following mental symptoms: depression, melancholy delusions, somnolence, and often coma.

D. MENTAL SYMPTOMS OF OTHER BODILY DISEASES.

I. Cardiac disease: depression and anxiety.

II. Pulmonary disease: mild euphoria and optimism.

III. Liver disease: melancholia, hypochondria, pessimism.

IV. Stomach disease: irritability, depression, pessimism.

V. Brain tumor and abscess, multiple sclerosis, chorea, and other nervous diseases present characteristic mental symptoms.

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PART III.

The Borderline Diseases: Psychoneuroses and Epilepsies

CHAPTER XXIV.

Neurasthenia and the Anxiety Neurosis.

I. Neurasthenia—Symptomatology.

1. Sensation.
   a. Hyperesthesia, especially extreme sensitiveness to light and noises (accompanied by photophobia and dysacousia).
   b. Paresthesias: various peculiar subjective sensations.
   c. Headache, and other transient pains.
   d. An exaggerated and *constant feeling of fatigue*, and a consequent diminished capacity for work.
2. Attention is distractible, and there results consequently (3).
3. Anterograde amnesia.
4. Affectivity: irritability, depression, pessimism, hypochondria.
5. Muscular weakness and *twitchings*, tremor, exaggerated reflexes.
6. Insomonia, and nightmare.
7. Nervous dyspepsia, and constipation.

II. The Anxiety Neurosis is a symptom complex separated by Freud from neurasthenia, and described as follows:

1. General irritability, shown especially by hypersensitiveness to noises, lights and other stimuli.
2. Anxious expectation, and attacks of anxiety, or *anxiety equivalents*, viz.: cardiac disturbances, respiratory disturbances, vasomotor disturbances, perspiration (often nocturnal), ravenous appetite, diarrhea, vertigo, paresthesias, shaking and trembling, sometimes stammering, etc.
3. Insomnia and pavor nocturnus.
4. Two groups of Phobias, determined by previous attacks of anxiety:
   a. Fear of physiological menaces, and moral culpability.
   b. Fears relating to locomotion and vertigo, as *agoraphobia*.

III. Etiology and Nature of the Disease.

1. Heredity or congenital predisposition, overwork, and excesses have long been recognized as important etiological factors.
2. The immediate cause is probably the accumulation of fatigue toxins; or perhaps more likely the consumption of the reserve

supply of oxygen and nutrient substances. *The expenditure is greater than the supply* either because the nervous energy is low to begin with, or because the drainage has been excessive (Binswanger).

3. Freud's theory: neurasthenia is due to *sexual excesses*, especially to masturbation, and the anxiety neurosis to abstinence or *inadequate sexual gratification.* The anxiety is thus of somatic origin, but later attaches itself to any suitable idea.
4. It is a form of *disintegration of consciousness*, in which somatic sensations and memories (especially memory of fatigue) persist, while the psychical pathogenic experience is dissociated, and the real fatigue has vanished. (Donley, Coriat).
5. Endocrinogenic theory. Recent investigations have shown that the psychoneuroses are often associated with endocrinal disorders. This fact has lead to the view that these diseases may be of endocrinal origin, Neurasthenia is thus the result of *an insufficiency of certain glands: especially adrenal, thryoidal, or genital.* That muscular asthenia is often due to adrenal insufficiency seems to be well established; but the endocrinal origin of the other so-called neurasthenic symptoms, and especially af psychasthenia, hysteria, and epilepsy is a moot question.

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CHAPTER XXV.

Hysteria.

The symptoms of this protean malady may be subdivided into: stigmata, which are more or less persistent; and accidents or episodic phenomena, which are intermittent and transitory.

I. The Stigmata.

1. Sensory stigmata: anesthesias and hyperesthesias, which may involve any sense. Especially noteworthy are the following:
   a. Cutaneous anesthesia: hysterical "glove," "stocking," hemianesthesia, etc.
   b. Visual anesthesias: contraction of the field, amblyopia, scotomata, hemianopsia, achromatopsia, micropsia, diplopia, etc.

   Hysterical anesthesias show the following peculiarities:
   (*a*) They do not conform to the anatomical distribution of nerves.
   (*b*) The anesthetic zones are moveable.
   (*c*) The patient is ignorant of them.
   (*d*) The reflexes associated with the insensitive areas are preserved.
2. Motor stigmata, may involve any functional muscle group.
   a. Paralyses, including astasia abasia, aphonia, mutism, etc.
   b. Contractures, rythmical spasms, and tics, such as: torticollis, nodding, winking, hiccough, cough, grunt, sob, laughter, etc.
   c. Tremors, choreiform movements, the hysterical dance.
3. Mental stigmata.
   a. Amnesia of reproduction, partial or total.
   b. Aboulia, and increased suggestibility.
   c. Affectivity: instability, variability, ego-centricity, and moral obtuseness, (*emotional infantilism*).
   d. Sexual instinct: eroticism, frigidity, perverseness.
   e. Dissociation and alternation of personality.

II. Episodic Phenomena.

1. The "Grand Attack," or hysterical fit (Charcot).

a. Prodromal stage: hallucinations, fixed ideas, depression or exaltation aura, nausea, "Globus hystericus," etc.
b. Epileptoid period: tonic phase, clonic phase, phase of resolution.
c. Period of clownism: contortions, opisthotonus or arc de circle, grand movements, rage or fear.
d. Passional period: mimicry of passional attitudes and actions.
e. Period of delirium: hallucinations, zoopsia, etc.

2. The so-called "Grand attack" is rare; abortive attacks are the usual thing, e. g. attacks of nausea, anorexia, vertigo, and globus; epileptoid and tetanic attacks; ecstacy, catalepsy, and syncope; sleep and dream states, *somnambulism or fugues*, subconscious acts, etc.

III. Etiology and Nature of the Disease.

1. Hysteria develops on the basis of an innate predisposition or *hysterical diathesis;* but besides heredity, emotional shocks and traumatisms are important exciting causes.
2. Babinski's theory: hysteria is a *state of increased suggestibility*. The symptoms are produced by suggestion or auto-suggestion, and can be removed by persuasion.
3. Sollier's theory: hysteria is a *vigilambulism*. It is a functional disturbance of the brain consisting in a torpor or sleep, local or general, of the cortical brain centers. The symptoms depend upon the centers affected.
4. Janet's theory: hysteria is a "*Form of mental depression characterized by the retraction of the field of personal consciousness and by the tendency to the dissociation and the emancipation of systems of ideas and of functions which by their synthesis constitute the personality.*" This narrowing and dissociation depend upon an inborn weakness of mental synthesis, and in addition upon stress or emotional shock.
5. Prince's theory is similar to Janet's: hysteria is a form of *dissociated or multiple personality;* and there is an alteration of states with amnesia on the part of one, or the other, or both.
6. Freud's theory: dissociation in hysteria is brought about by *conflict* and *repression* of complexes of ideas that are incompatible with the conditions of civilized life. These repressed complexes are aways sexual wishes or phantasies (trends) of early childhood, and although repressed they are still dynamic. Their pent up energy or *libido* is therefore converted into phys-

ical innervations and inhibitions, which constitute the hysterical symptoms. These symptoms are thus *compromise formations* between two opposed trends: a sexual trend and repressing trend. The repressed sexual trend is fulfilled by its *conversion* into a physical symptom. This outcome is possible only in a hereditarily predisposed character, viz., the *psychosexual constitution.* The hysterical symptom or attack is rendered incomprehensible by methods of distortion of the wish or trend similar to the methods employed in dreams, viz:

a. Condensation: the symptom is determined by many wishes (i. e. trends).
b. Change of a trend to its opposite, e. g. movements of affirmation to those of negation.
c. Multiple identification: the patient carries out the movements of both persons in the wish phantasy, i. e. the male and female.
d. Inversion of the time sequence in the fulfilled wish phantasy: the attack begins with the end of the action in order to conclude with its beginning.

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CHAPTER XXVI.

Psychasthenia.

This malady was first described as a distinct disease form by Janet. It corresponds to the *obsessional neurosis* of Freud.

I. Symptomatology. It is characterized by recurrent and irresistible *obsessions* accompanied by mental anguish.

1. Intellectual obsessions: the persistence of some idea or question often of a metaphysical nature (Grubelsucht).
2. Inhibiting obsessions: doubts, scruples, and fears. All the *Phobias* listed in Chapter X find a place here.
3. Impulsive obsessions, or *manias*: onomatomania, arithmomania, kleptomania, pyromania, dipsomania, homicidal and suicidal manias, etc.
4. The feeling of *inadequacy and incompleteness* in every thing.
5. The feeling of *unreality and depersonalization:* the psycholeptic crisis of Janet.
6. Psychic or pseudo-hallucinations.
7. Tics, involuntary, systematized muscular movements.

II. Etiology and Nature of the Disease.

1. It is a disease of degeneration: neuropathic heredity is generally found.
2. Janet's theory: psychasthenia is due to "*A lowering of the psychological tension,*" which results in an inadequate perception of reality. Hence the feeling of strangeness, and the consequent fear of that which is not adequately comprehended. This lowered tension can be thought of as a general looseness of synthesis, which shows the relation of psychasthenia to hysteria, a complete dissociation.
3. Freud's theory: the *affect* of a repressed complex instead of being converted into a physical symptom as in hysteria, is transferred or displaced to some indifferent idea. The obession is in every case a transformed reproach, which has escaped from the repression and is always connected with some pleasur-

ably accomplished sexual act of childhood—it is an *over-compensation* for such an act.

4. Prince's theory: the obsession is determined by *subconscious dissociated processes*. The emotion (usually anxiety or fear) pertaining to an idea emerges into consciousness, while the idea itself remains submerged; or both emotion and idea may emerge into consciousness and only the meaning of the idea remain submerged (as in the specific phobias).

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CHAPTER XXVII.

The Neuroses in General:

THEORIES AND CLASSIFICATIONS.

I. Freud's Classification of the Neuroses, or as he prefers to call them, *sexual neuroses* is presented here. For the etiological details, see previous chapters.

1. The true neuroses. Here the cause lies in the present abnormal sexual conditions.
   a. Neurasthenia.
   b. Anxiety neurosis.
2. The psychoneuroses. Here the cause lies in the activity of repressed complexes belonging to the sexual life of childhood.
   a. Hysteria.
   b. The obsessional neurosis.

The most important pathogenic repressed complex is the so-called *Oedipus complex*, i. e. the rivalry with the father for the love of the mother. This is the "Nuclear complex of the psychoneuroses."

II. Jung and the Zurich School differ from Freud in the following respects:

1. The Conception of the *libido*, or sexual energy, is broadened to mean a living force or energy, which is manifested in other activities as well as the sexual.
2. The Neurosis is determined not by childhood sexual experiences, but by some present conflict or obstacle that the patient is unable to overcome. *He, therefore, turns aside from reality and regresses to a more infantile form of libido occupation which is converted into symptoms.*
3. For the Oedipus complex of Freud, Jung substitutes the *Parent-Imago*, which is not the real father and mother, but a subjective creation; and he denies that the parent has any real sexual significance for the child.

III. Adler's Theory of the Neuroses.

1. The neurotic symptom is a *compensation formation for the feeling of inferiority* (and uncertainity) that is based upon some

actual or supposed defect. This compensation may take two forms.

a. The assurance: the symptom is a barricade to secure the neurotic from the results of his inferiority. *The "Flight into disease" assures against the dangers of life*, e. g. a syphilophobia guards the erotic against temptation.

b. The manly protest, the "wish to be a complete man." The neurotic sympom represents a protest or revolt against a constitutional inferiority, or an inferior position in life, real or imagined. Thus, hysteria in women is frequently a protest against the supposed inferior position of women in general.

2. Degeneracy, neurosis, and genius are related as follows:

a. The degenerate succumbs to his inferiority, the compensation is unsuccessful.

b. The genius completely compensates by remolding himself or reality to suit his purposes.

c. The neurotic partly compensates, but does so by "Negating reality and seeking refuge in fantasy."

IV. Sidis's Classification and Theory of Nervous and Mental diseases.

1. Organopathies or necropathies, due to degenerative modification of the structure of the cell terminating in its death, e. g. paresis, dementia precox, etc.

2. Neuropathies, due to *changes in the neurone* which are recoverable, e. g. toxic psychoses, manic-depressive insanity, etc.

3. Psychopathies, due to *dissociation of systems of neurones* because of abnormal variation in synaptic resistance, while the neurones themselves remain undamaged.

a. Somopsychoses, or somatic neuroses are those in which the physical symptoms predominate, and the mental side of the malady is submerged. Here belong the hysteria and neurasthenia of the literature.

b. Psychoneuroses, or neuropsychoses are those in which the mental symptoms predominate, and physical symptoms are few or absent: the psychasthenia of Janet.

Etiological factors of these *psychopathic diseases* are as follows:

(*a*) Emotional shocks which affect the central nucleus of the personality. The particular shock that precipitates the disease is but the last in a chain of similar shocks dating

back to early child life. *Fear* is the most frequent of such pathogenic experiences.

(*b*) A predisposition to dissociative states.

V. Kraepelin's Classification of these Borderline Diseases.

1. Psychogenic diseases.
   a. The ponopathies, or activity neuroses.
      (*a*) Nervous exhaustion (neurasthenia).
      (*b*) Expectation neurosis.
   b. Homilopathies, or social psychoses (verkehrpsychosen).
      (*a*) Induced insanity, folie à deux.
      (*b*) Delusional insanity of the deaf.
   c. Symbantopathies, or vicissitude psychoses.
      (*a*) Accident neuroses: the dread neurosis, and traumatic neurosis.
      (*b*) Psychogenic mental disorders of prisoners.
      (*c*) Querulant insanity.
2. Hysteria: developmental, degeneration, alcohol, accident, and permanent hysterias.
3. The original diseased states.
   a. Nervosity, or nervousness.
   b. Compulsion neurosis.
   c. Impulsive insanity.
   d. The sexual aberrations.
4. The Psychopathic personalties.
   a. The excitable.
   b. The unstable.
   c. Triebmenschen: the prodigal, the wanderer, the periodic drinker, etc.
   d. The eccentric (verschrobenen).
   e. The liar and swindler.
   f. The antisocial.
   g. The quarrelsome (streitsuchtigen).

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CHAPTER XXVIII.

Epilepsy.

Epilepsy is "Characterized by recurrent paroxysms which are abrupt in appearance, variable in duration but usually short, and in which there is impairment or loss of consciousness, together with impairment or loss of motor coordination, with or without convulsions." (Spratling). According to Féré epilepsy is not a morbid entity, but a group of symptoms due to different pathological conditions. We should, therefore, speak of "The Epilepsies" rather than of epilepsy in the singular.

I. The Permanent or Interparoxysmal Disorders, or "*Psychic stigmata*" of epilepsy are as follows:

1. Anesthesias or hypesthesias are common, especially considerable *insensibility to pain.*
2. Anomalies of feeling and emotion.
   a. Apathy, and at times irritability and variability of feeling.
   b. Loss of voluntary control of the emotions.
   c. Irascibility, *ill-humor*, and violent fits of anger.
   d. Gluttony and abnormal appetite.
   e. Sexual excitement and sexual polyvalence.
   f. Extreme egoism, and deficiency of the altruistic sentiments.
   g. Morbid *religious fanaticism*, usually ostentatious with no influence upon morality.
3. Anomalies of conduct and action.
   a. Sudden impulsive reactions, often brutal.
   b. Stubbornness, *obstinacy*, and tenacity of purpose.
   c. Duplicity, suspicion, and vindictiveness.
   d. Speech is drawling, jerky, or strongly accented.
4. As a result of repeated convulsions, a gradually progressive dementia usually supervenes, characterized by:
   a. Insufficiency of perception, and inattention.
   b. Amnesia, except for important events.
   c. Dearth of ideas, and *circumstantiality.*
   d. Judgment becomes impaired, and there are transitory hypochondriacal, persecutory, or grandiose delusions.

e. There is a tendency to remission, if attacks become less frequent.

II. Preparoxysmal Period. For a few hours or sometimes days preceding the fit certain stigmata are exaggerated and the patient becomes:

1. Extremely restless and impulsive;
2. Morose, ill-tempered, suspicious, and hypochondriacal.

III. The Epileptic Aura or "Warning" is the immediate *prodrome* of the attack.

1. Sensory aura are the most common.
   a. Visual aura: photomata, and hallucinations.
   b. Auditory aura: akoasms, and verbal hallucinations.
   c. Olfactory, and gustatory aura are infrequent.
   d. The "Epigastric aura" is similar to "Globus hystericus."
   e. Giddiness and vertigo.
2. Psychic aura.
   a. Acceleration or increased vividness of imagination.
   b. Fear, apprehension of danger, distress, etc.
   c. Feeling of buoyancy, rapture, or ecstacy.
   d. Attack of drowsiness.
3. Motor aura: running, turning around, trembling, or jerking of all or of parts of the body, etc.

IV. The Convulsion or Fit.

1. Grand mal, the complete attack.
   a. The tonic stage lasts from one to two minutes. There is vigorous contraction of all the muscles, and the patient falls unconscious, often emitting a peculiar cry. The face becomes *cyanotic.*
   b. The clonic stage lasts from one to five minutes: rythmic relaxation and contraction of the muscles. The tongue is frequently bitten.
   c. Period of stertor and coma, complete relaxation and often sleep.
2. Status epilepticus is a form of epilepsy "In which one paroxysm follows another so closely that the coma and exhaustion are continuous between seizures."
3. Petit mal, or incomplete and abortive attack.

a. There is a mild degree of muscular disturbance, but the patient rarely falls.

b. Consciousness is not so much involved: most frequent are the momentary losses or "Absences," and attacks of vertigo.

4. Jacksonian epilepsy is a form in which the disturbance is purely *motor and localized*, i. e. isolated groups of muscles are affected. It is due to some form of focalized lesion of the cortex.

V. Epileptic Equivalents sometimes take the place of the actual convulsion. These are of many forms.

1. Transitory, periodic depression and ill-humor: fault-finding, irritability.
2. Attacks of excitement, in the extreme form "Epileptic furor:" impulsiveness, violence, brutality, and homicidal tendencies.
3. Epileptic stupor: psychomotor retardation, clouding of consciousness, catatonic attitudes, occasional impulsive actions, and sometimes catalepsy.
4. Epileptic confusion: imperception, dreamy clouding of consciousness and disorientation.
5. Epileptic delirium: clouding of consciousness, disorientation, and terrifying hallucinations; also fear, anxiety, restless activity, distructiveness, violence, and furor.
6. Epileptic automatism: may vary from a single impulsive act to weeks or even months of *apparently conscious* activity, which is however *completely forgotten on recovery.* Long journeys, and various criminal acts frequently occur in this "Psychic Epilepsy." It is difficult to distinguish from *hysterical somnambulism.*
7. Narcolepsy, attack of deep, and usually prolonged sleep.
8. Dipsomania, periodic impulse to alcoholic excesses may be epileptic.

VI. Post-Paroxysmal Phenomena: amnesia, dazedness, and drowsiness usually follow the attack; but *any of the phenomena described as equivalents may be post-epileptic.* In fact it is frequently argued that the so-called equivalents are always preceded by a petit mal attack so slight as to escape observation, and are therefore always post-paroxysmal phenomena.

VII. Etiology of Epilepsy.

1. Defective heredity is found in as much as 80% of the cases: parental epilepsy in 25% (Kraepelin), parental alcoholism in

about 15% (Spratling), and parental tuberculosis, insanity, syphilis, rheumatism, and neuropathic diseases make up the rest.

2. Age: it is primarily a disease of youth—75% of the cases begin before the twentieth year (Stoddart).

3. Among the exciting causes are: dentition, acute infections, cerebral palsies, meningitis, renal and heart disease, emotional shock, overwork, trauma, poisoning, excessive alcoholism, and syphilis.

VIII. Nature of the Disease.

1. The theory of cortical instability: the neurones are so irritable that they are occasionally thrown into violent and explosive activity by some trivial cause.

2. Circulatory theory: the convulsion is due to the sudden removal of the cortical blood supply by fall of blood pressure, local vasoconstriction, or intravascular clotting.

3. Autointoxication theory: the fit is due to the periodic accumulation of toxins in the blood (probably ammonium carbamate). These poisons are eliminated during the fit; hence the rapid recovery. They may be of endocrinal origin.

4. It was first supposed to be a disease of the medulla, then of the cornu ammonis, and finally of the cerbral cortex. According to Spratling the most striking changes are found in the sensory cells of the second cortical layer; and the destruction of these cells is followed by progressive gliosis to fill the vacancy. These cell changes are probably due to the action of some toxic agent. This view makes epilepsy essentially "*A sensory disease with a motor manifestation.*"

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LIST OF ABBREVIATIONS USED IN REFERENCES.

A. J. I.—American Journal of Insanity.
A. J. P.—American Journal of Psychology.
B. J. P.—British Journal of Psychology.
J. A. P.—Journal of Abnormal Psychology.
J. N. M. D.—Journal of Nervous and Mental Diseases.
J. P. P. S.—Journal of Philosophy, Psychology, and Scientific Method.
N. M. D. Mon.—Nervous and Mental Disease Monograph.
P. B.—Psychological Bulletin.
Psy. Rev.—Psychological Review.


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